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JLG 13070B-5A Construct New IT Center
St Cloud VAHCS Proj. No. 656-14-246

RE: Amendment No. 4
May 12, 2016

Amendment No.4 (05.12.2016)

Please issue the following changes to the contract documents as Amendment No. 4 (May 12, 2016) for the Construct New IT Center for Healthcare Management Expansion Project at the St. Cloud, MN VAHCSC (Project No. 656-14-246)

To:	CC:	
☐	☒	Justin Lappin St. Could VA
☒	☐	Jorge Rivera-Roque St. Could VA
☐	☒	Aaron Mueller Design Tree Engineering
☐	☒	file JLG Architects

Sheet #	Sheet Name	Description of Change

GENERAL:

- FBO issued drawings, dated Dec-2014 shall be REPLACED by new drawing files dated Apr-2015.
- Specifications as issued on FBO are the correct files (Apr-2015 date on cover).
- See attached Doc Coord Memo.

ARCHITECTURAL:

• A101	Replace Demo Plan 1/A101 with drawing 1/A101rev. Update demolition Keynotes on sheet A101, with those found on drawing 1/A101rev.

MECH/ELEC/TECH:

• ---	See attached Design Tree Engineering Amendment No4, dated 05.12.2016

Attachments:

- 1/A101rev, dated 05.12.2016
- Doc Coord Memo, dated 05.12.2016
- Design Tree Engineering Amendment No 4 (13 pages total)

JLG 13070B VA B108 New IT Data Center (VA Project No.: 656-14-246)

RE: Amendment Clarifications

May 12, 2016

To:	CC:	
☒	☐	Richard Digatono VA – Contract Specialist
☒	☐	Jorge Rivera-Roque VA – COR

In an effort to clear up confusion regarding files posted to the FBO and amendment naming etc, the below chart is offered:

2015 Bid Period	2016 Bid Period FBO Files
	VA263-16-R-0153-000 pre solicitation
	VA263-16-R-0153-001 solicitation
	VA263-16-R-0153-002 SOW
	VA263-16-R-0153-003 sched brkdn sht
	VA263-16-R-0153-004 mn wage
	VA263-16-R-0153-005,006,007 specs
Amendment No6	**VA263-16-R-0153-008** AMEND No6 combined (does NOT mean all previous amendments are combined into this file)
	VA263-16-R-0153-009 thru 017 drawing files (FILES TO BE REPLACED VIA AMEND No4 … REPLACE w/ DOCUMENTS DATED APR-2015)
	Amend No1 2016
	VA263-16-R-0153-A00001000 Amend No1- site visit cancel, issue all previous Q/A from previous bids
	VA263-16-R-0153-A00001001 discrepancies in sheet index info
Amend No 3	**VA263-16-R-0153-A00001002** previous Amend No3, RFI Q/A 05.01.15
Amend No 4	**VA263-16-R-0153-A00001003** previous Amend No4, Contractor Q/A
Amend No 5(a)	**VA263-16-R-0153-A00001004** previous Amend No5a, 5 pgs Q/A
Amend No 5(b)	**VA263-16-R-0153-A00001005** previous Amend No5b, attC – solic Q/A
Amend No 6 … same as -008 above	**VA263-16-R-0153-A00001006** previous Amend No6, JLG 12.10.15, DTE 10.12.15, includes Tech revision sheets (13 pages total)
Amend No 6 05.21.15	**VA263-16-R-0153-A00001007** previous Amend No6, RFI005 05.21.15 Q/A
	VA263-16-R-0153-A00001008 previous consolidated Q-A … appears to be all previous Q/A combined into one file. Bidders to review all files to ensure this is the case.
	Amend No2 2016
	VA263-16-R-0153-A00002000 Amend No2 – site visit revised date, questions due by May 17th.
	Amend No3 2016
	VA263-16-R-0153-A00003000 Amend No3
	VA263-16-R-0153-A00003001 Amend No3 attach – splicing qualifications

- All files issued during this 2016 Bidding Period must be reviewed and taken into consideration when submitting bids.
- An amendment is planned for Thursday 05.12.2016 addressing some mechanical items, and various cabling plan notes etc. This 05.12.2016 Amendment will be Amend No4 2016. Any changes to already issued amendments will be cited by calling to change/revise previously issued amend noX, item noX, etc.

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- Posted drawing files 009 thru 017 to be replaced with drawing files dated Apr-2015, as part of Amend No4 2016.
- Any future additional amendments needed before bids are taken will follow as Amend No5 2016, etc.

DEMOLITION KEYNOTES

EXTERIOR DEMOLITION

1. REMOVE EXISTING CONCRETE FOUNDATION WALL AND ASSOCIATED STRUCTURES AS REQ'D FOR NEW CONSTRUCTION (SEE NEW WORK DRAWINGS FOR LOCATION AND EXTENT OF DEMOLITION REQ'MTS).

2. LOCATE A HOLDOUT IN EXISISTING TUNNEL WALL FOR NEW CABLE TRAY ACCESS INTO NEW BASMENT. COORDINATE LOCATION WITH NEW CONSTRUCTION & IT DRAWINGS.

3. REMOVE EXISTING EXTERIOR BRICK AND METAL STUD WALL SYSTEM. COORDINATE EXTENT W/NEW WORK DRAWINGS

4. DEMO COORIDOR NON HISTORICALLY RELEVANT WINDOWS. INFILL TO MATCH COORIDOR WALLS.

SALVAGE & RELOCATE

5. REMOVE EXISTING CONDENSOR LOCATED UNDER METAL EXIT STAIR COORDINATE WITH MECHANICAL.

4 AMEND 4 2016

6. REMOVE EXISTING METAL EXIT STAIR AND PLATFORM.

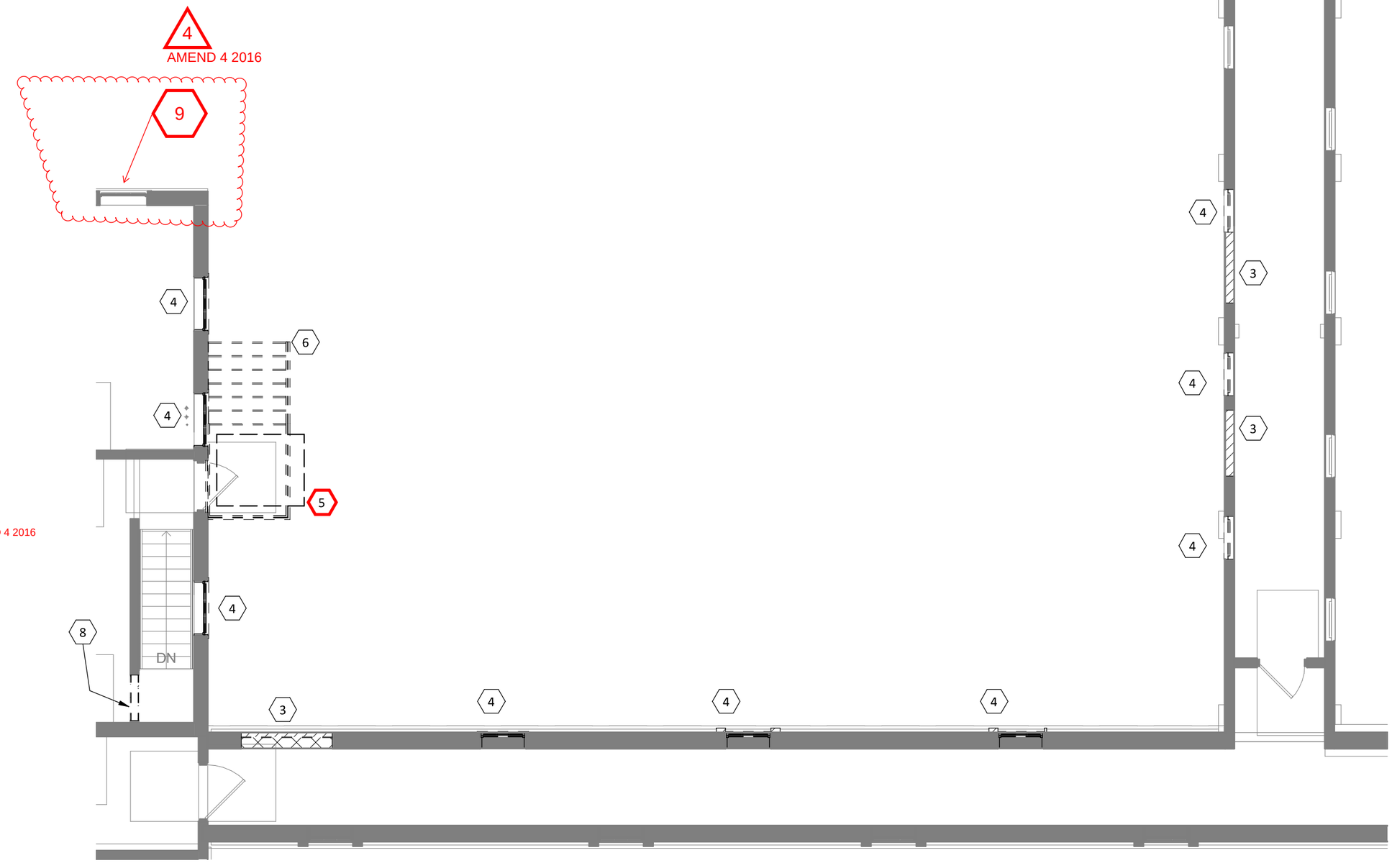
7. SELECTIVE DEMO OF EXISTING ROOF AS REQUIRED FOR INSTALLATION OF NEW ROOF. CORRIDOR BELOW TO REMAIN IN USE THROUGHOUT DURATION OF PROJECT.

8. REMOVE EXIT DOOR AND FRAME.

9. REMOVE & SALVAGE WINDOW SASH FOR RE-USE. INSTALL METAL STUD INFILL FRAMING & EXTERIOR SHEATHING IN OPENING. COORDINATE DUCT PENETRATIONS W/ MECHANICAL. REMOVE INFILL AND REPLACE SASH FOLLOWING INSTALL OF NEW AHU-4. SEE MECHANICAL.

4 AMEND 4 2016

4 AMEND 4 2016



1 FIRST FLOOR DEMOLITION PLAN

SCALE: 1/8" = 1'-0"

JLG architects

ST. CLOUD VA HCS

CONSTRUCT NEW IT CENTER FOR HEALTH CARE TECHNOLOGY MANAGEMENT EXPANSION

ST. CLOUD, MN 56303

DATE 05/12/16 PROJECT JLG 13070B

ISSUED FOR: AMENDMENT #4

FROM SHEET NO. A101 SHEET NO. 1/A101rev

Design Tree
ENGINEERING AND LAND SURVEYING

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(320) 217-5557

AMENDMENT NO. 4
May 12, 2016

PROJECT: Construct New IT Center for
St. Cloud VA Health Care System

This Amendment shall be added to and become a part of the original plans and specifications. All items shall be as originally specified or drawn, unless specifically amended by this or subsequent Amendments. Receipt of this Amendment must be acknowledged on bid form.

DRAWING CHANGES AND CLARIFICATIONS:

1. Change General Note #2 on drawings 2/CP3-1, to read as follows: "COORDINATE WITH OWNER LOCATION AND ELEVATION OF FIBER OPTIC PATCH PANELS IN EACH TELECOMMUNICATION ROOM"

2. Delete the following drawings: 3/CP1-0, 2/CP1-3, 2/CP2-2, 2/CP4-0, 2/CP4-1, 5/CP9-0.1.2, 6/CP9-0.1.2, 2/CP28-1, 2/CP28-2, 2/CP29-1, 2/CP29-2, 2/CP48-0, 2/CP49-0, 2/CP50-0, 2/CP50-2, 2/CP51-0, 2/CP51-2, 2/CP59-0.

3. Delete key note #1 from the following drawing: 2/CP1-0, 2/CP1-1, 3/CP1-1, 2/CP1-2, 3/CP1-2, 2/CP2-0, 2/CP2-1, 2/CP4-1, 2/CP4-2, 3/CP5-0.1, 2/CP8-0, 4/CP9-0.1.2, 5/CP9-0.1.2, 6/CP9-0.1.2, 2/CP10-0, 2/ CP11-0, 4/CP14-0.1, 2/CP28-0, 2/CP48-1, 2/CP48-2, 2/CP49-1, 2/CP49-2, 2/CP50-1, 2/CP51-1, 2/CP59.109-1, 2/CP88-1, 2/CP95-1, 2/CP96-1.

4. Change Key Note #1 on drawings 2/CP3-1 and 2/CP3-2 to read as follows" TERMINATE NEW FIBER BACKBONE CABLES ON RACK MOUNTED PATCH PANEL PER FIBER OPTIC BACKBONE DIAGRAM".

5. Replace the detail 1/T102 with the detail T101.2 found in the Amendment 1 document VA263-16-R-0153-A00001006.

6. Replace drawing T502.1 issued in Amendment 1 document VA263-16-R-0153-A00001006 with the attached drawing T502.1.

7. Add the condensation lift station in the basement mechanical room shown on attached drawing E401.

8. Relocate the existing building 4 conference room split system condensing unit shown on attached drawing E402.

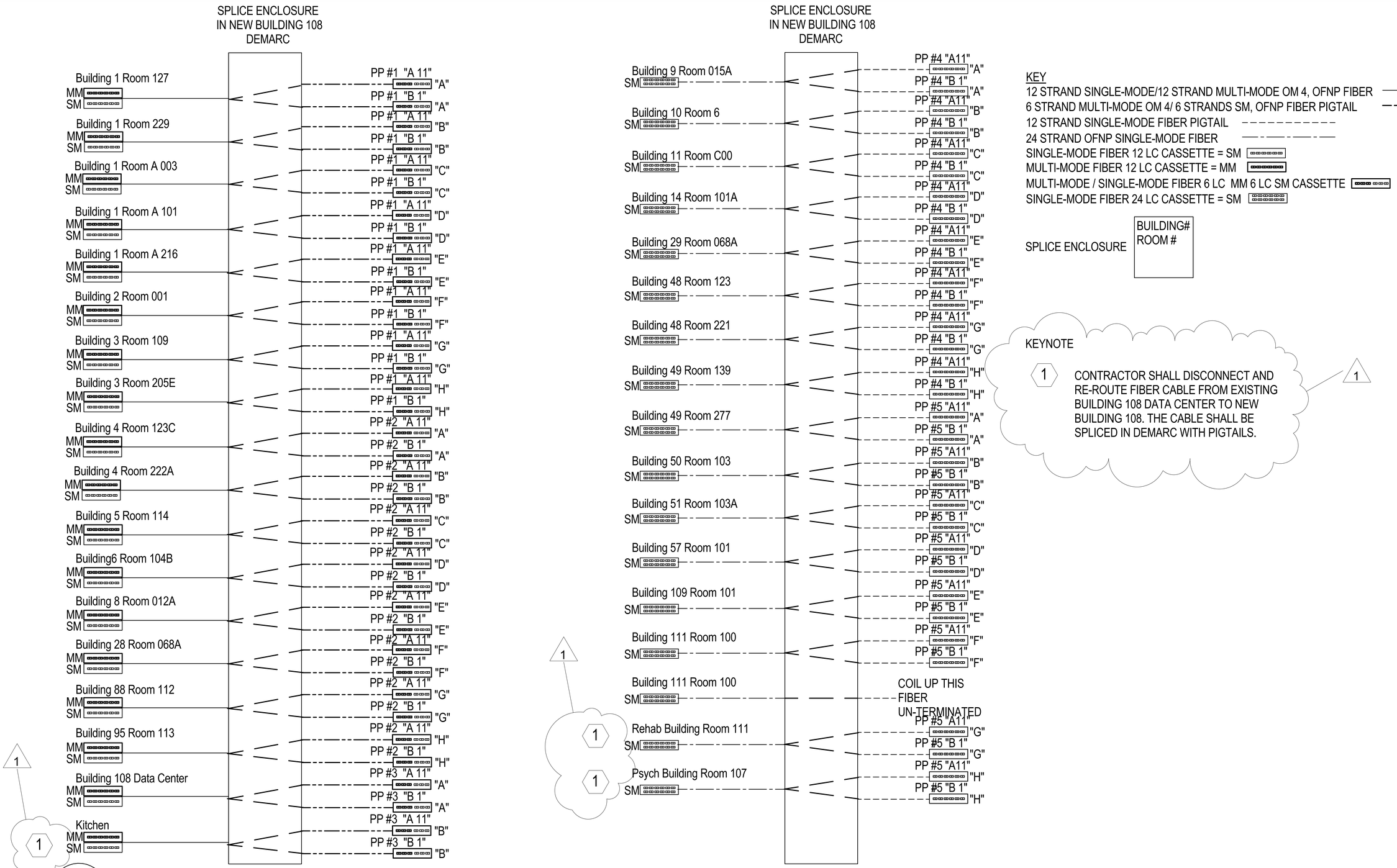
9. Add the condensation lift station CLP-1 to the motor schedule as shown on the attached drawing E901.

10. Revise a spare breaker in panelboard 4B-EQ to feed CLP-1 as shown on the attached drawing E902.

11. Drawing M201, M202, M402, M701, and M801: See attached revisions.

ATTACHMENTS:

1. Drawing M201
2. Drawing M202
3. Drawing M402
4. Drawing M701
5. Drawing M801
6. Drawing E401
7. Drawing E402
8. Drawing E901
9. Drawing E902
10. Drawing CP4.1
11. Drawing T502.1



3 FIBER BACKBONE DIAGRAM

SCALE: NTS

JLG architects

ST. CLOUD VA HCS

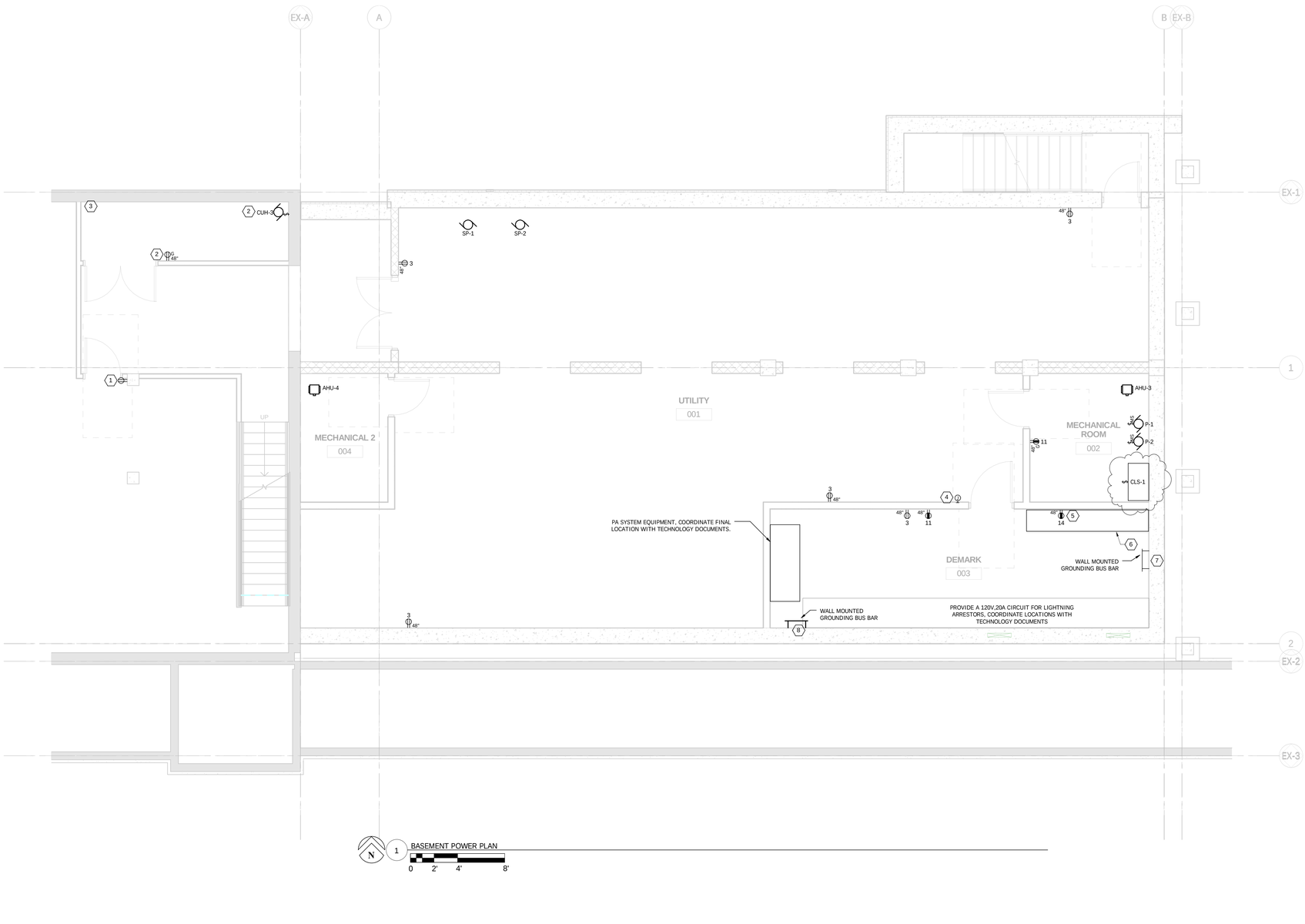
CONSTRUCT NEW IT CENTER FOR HEALTH CARE TECHNOLOGY MANAGEMENT EXPANSION

ST. CLOUD, MN 56303

DATE 05/12/16 | PROJECT 656-14-246

ISSUED FOR: AMENDMENT #4

FROM SHEET NO. | SHEET NO. T502.1



BASEMENT POWER PLAN

0 2' 4' 8'

X KEYNOTES:

1. REMOVE EXISTING RECEPTACLE.
2. CIRCUIT NEW DEVICE TO EXISTING RECEPTACLE CIRCUIT IN BASEMENT OF BUILDING 4.
3. COORDINATE WALL MOUNTED MECHANICAL EQUIPMENT MODIFICATIONS NEEDED FOR COORDINATION OF NEW WALL WITH THE MECHANICAL DOCUMENTS.
4. DOUBLE GANG JUNCTION BOX MOUNTED AT DOOR HANDLE HEIGHT FOR CARD READER. PROVIDE CONDUIT STUBBED UP ABOVE ACCESIBLE CEILING FOR INSTALLATION OF CABLING UNDER DIVISION 28. COORDINATE SIZE OF JUNCTION BOX REQUIRED FOR THE KEYPAD PROVIDED UNDER DIVISION 28 PRIOR TO INSTALLATION. COORDINATE ADDITIONAL CONDUIT REQUIREMENTS WITH DIVISION 28.
5. EMERGENCY RECEPTACLE DEDICATED FOR CENTURYLINK EQUIPMENT. COORDINATE FINAL LOCATION WITH CENTURYLINK AND THE COR.
6. SPACE DEDICATED FOR CENTURYLINK VOICE/DATA SERVICE EQUIPMENT. CONTRACTOR SHALL INCLUDE ALL CENTURYLINK WORK IN THE BASEBID PRICE. CONTRACTOR IS RESPONSIBLE FOR ALL COORDINATION WITH CENTURYLINK AND ESTABLISHING THE NEW SERVICE AT THE BUILDING. REFER TO TECHNOLOGY DOCUMENTS FOR ADDITIONAL INFORMATION.
7. GROUNDING BUS BAR DEDICATED FOR CENTURYLINK EQUIPMENT. COORDINATE FINAL LOCATION WITH CENTURYLINK. PROVIDE A 1/0AWG GROUNDING CONDUCTOR TO SERVICE ENTRANCE EQUIPMENT.
8. GROUNDING BUS BAR DEDICATED FOR LIGHTNING ARRESTORS AND DEMARK EQUIPMENT. COORDINATE FINAL LOCATION WITH TECHNOLOGY EQUIPMENT SUPPLIER. PROVIDE A 1/0AWG GROUNDING CONDUCTOR TO SERVICE ENTRANCE EQUIPMENT.

GENERAL NOTES:

1. PROVIDE A 208V/20A CIRCUIT TO THE PA EQUIPMENT. COORDINATE FINAL LOCATION WITH THE TECHNOLOGY DOCUMENTS AND THE COR. CONTRACTOR SHALL FEILD VERIFY VOLTAGE AND RATING OF EXISTING PA EQUIPMENT PRIOR TO ROUGH-INS. REFER TO TECHNOLOGOY DOCUMENTS FOR ADDITIONAL INFORMATION.

CONSTRUCTION DOCUMENTS 100%

No	REVISION	DATE
1	AMENDMENT #4	05.12.16

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STAMP/SEAL
I HEREBY CERTIFY THAT THIS PLAN, SPECIFICATION, OR REPORT WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.

Aaron R. Mueller, PE — LIC. NO. 48184
DATE: 12/03/14

DRAWING TITLE: BASEMENT POWER PLAN

PROJECT TITLE: CONSTRUCT NEW IT CENTER FOR HEALTH CARE TECHNOLOGY MANAGEMENT EXPANSION

DESIGNED: NEW IT | CHECKED BY: RSB | DRAWN: ARM

LOCATION: ST. CLOUD VA HCS, ST. CLOUD, MN 56303

DATE: 04.01.15
PLOT SCALE: AS NOTED
PROJECT NO: 666-13-240
CAD FILE:
DRAWING NO: E401

St. Cloud VA Health Care System
Brainerd | Montevideo | Alexandria

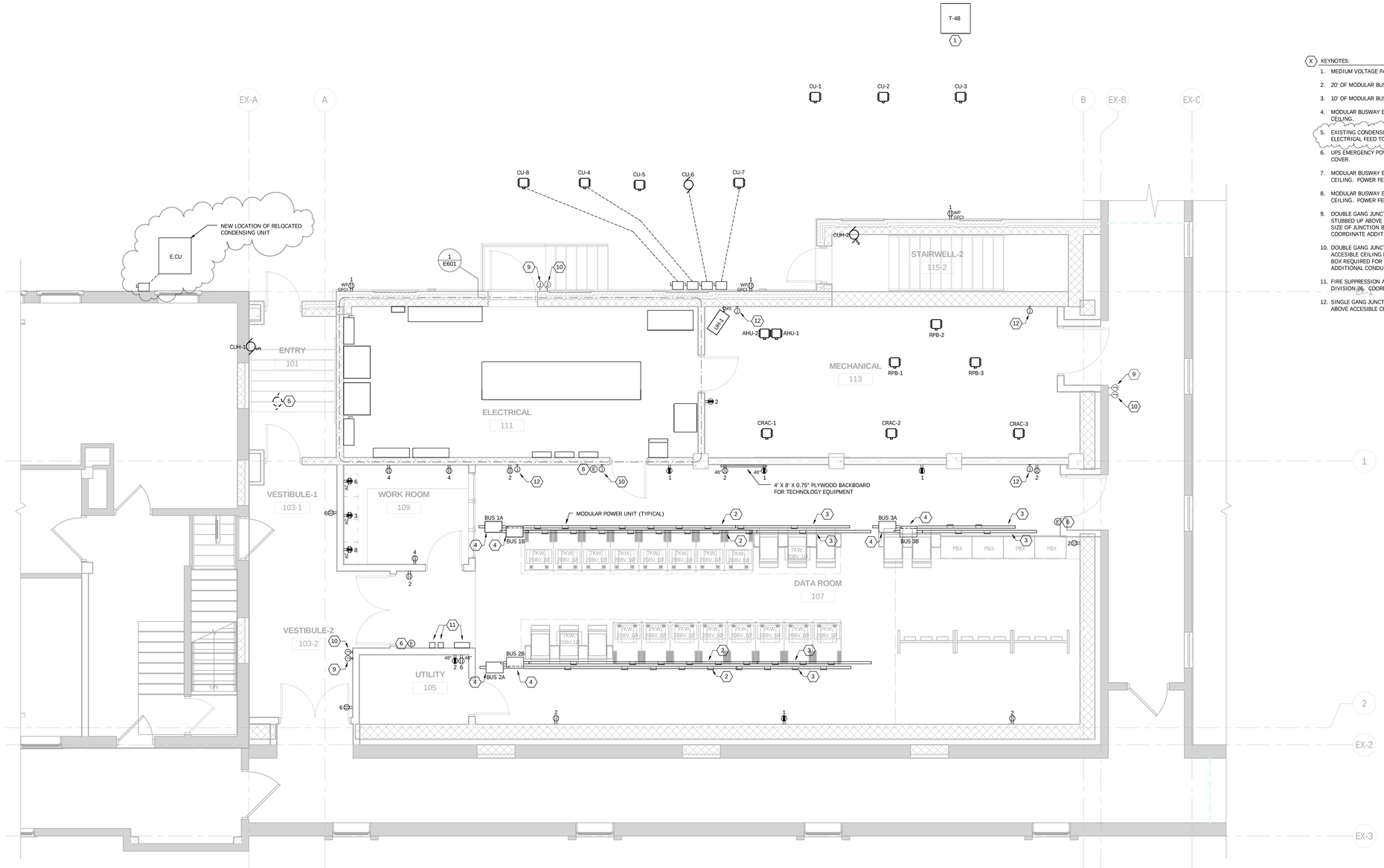
VA FORM 08 - 6231

GENERAL NOTES:

1. MOUNT MODULAR BUSWAY TO THE STRUCTURAL CEILING. PROVIDE MANUFACTURER MOUNTING HARDWARE AND DEVICES FOR SECURING THE BUSSWAY. MODULAR DEVICES SHALL BE LOCATED UNDER THE GRID CEILING. COORDINATE LOCATION WITH OTHER CEILING MOUNTED EQUIPMENT AND DATA RACK LOCATIONS.
2. SEAL ALL CONDUIT OPENINGS THROUGH DATA ROOM WALLS WITH DUCT SEAL OR SIMULAR TO PREVENT THE FIRE SUPPRESSION GAS TO LEAK INTO ADJECENT AREAS.
3. REFER TO TECHNOLOGY DRAWINGS FOR CONDUIT ROUGH-INS REQUIRED FOR SECURITY EQUIPMENT. NOT ALL ROUGH-INS ARE SHOWN ON THIS DRAWING.
4. PROVIDE A 120V CIRCUIT ABOVE EACH DOOR WITH A CARD READER. REFER TO TECHNOLOGY DOCUMENTS FOR ADDTIONAL INFORMAITON.

X KEYNOTES:

1. MEDIUM VOLTAGE PAD MOUNT TRANSFORMER. REFER TO SITE PLANS FOR LOCATION.
2. 20' OF MODULAR BUSWAY; QUANTITY OF MODULAR POWER UNITS AS SHOWN.
3. 10' OF MODULAR BUSWAY; QUANTITY OF MODULAR POWER UNITS AS SHOWN.
4. MODULAR BUSWAY END POWER FEED UNIT, SIZE AND ORIENTATE FOR INSTALLATION IN SPACE ABOVE CEILING.
5. EXISTING CONDENSING UNIT TO BE RELOCATED TO LOCATION SHOWN WEST OF GRID LINE EX-A. RELOCATE ELECTRICAL FEED TO NEW LOCATION. REMOVE ALL ABANDONED ELECTRICAL.
6. UPS EMERGENCY POWER SHUTDOWN PUSHBUTTON PROVIDED IN A PROTECTED ENCLOSURE WITH FLIP OPEN COVER.
7. MODULAR BUSWAY END POWER FEED UNIT, SIZE AND ORIENTATE FOR INSTALLATION IN SPACE ABOVE CEILING. POWER FEED UNIT TO BE FED FROM SAME CIRCUIT FEEDING BUS 3A.
8. MODULAR BUSWAY END POWER FEED UNIT, SIZE AND ORIENTATE FOR INSTALLATION IN SPACE ABOVE CEILING. POWER FEED UNIT TO BE FED FROM SAME CIRCUIT FEEDING BUS 3B.
9. DOUBLE GANG JUNCTION BOX MOUNTED AT DOOR HANDLE HEIGHT FOR CARD READER. PROVIDE CONDUIT STUBBED UP ABOVE ACCESIBLE CEILING FOR INSTALLATION OF CABLING UNDER DIVISION 28. COORDINATE SIZE OF JUNCTION BOX REQUIRED FOR THE KEYPAD PROVIDED UNDER DIVISION 28 PRIOR TO INSTALLATION. COORDINATE ADDITIONAL CONDUIT REQUIREMENTS WITH DIVISION 28.
10. DOUBLE GANG JUNCTION BOX MOUNTED AT 46" AFF FOR KEY PAD. PROVIDE CONDUIT STUBBED UP ABOVE ACCESIBLE CEILING FOR INSTALLATION OF CABLING UNDER DIVISION 28. COORDINATE SIZE OF JUNCTION BOX REQUIRED FOR THE KEYPAD PROVIDED UNDER DIVISION 28 PRIOR TO INSTALLATION. COORDINATE ADDITIONAL CONDUIT REQUIREMENTS WITH DIVISION 28.
11. FIRE SUPPRESSION AND DETECTION EQUIPMENT, PROVIDE 120V CIRCUITS TO THIS EQUIPMENT UNDER DIVISION 26. COORDINATE EQUIPMENT REQUIREMENTS AND LOCAITON WITH THE DIVISION 28 DOCUMENTS.
12. SINGLE GANG JUNCTION BOX MOUNTED AT 8' AFF FOR MOTION DETECTOR. PROVIDE CONDUIT STUBBED UP ABOVE ACCESIBLE CEILING FOR INSTALLATION OF CABLING UNDER DIVISION 28.



N 1 FIRST FLOOR POWER PLAN

0 2' 4' 8'

CONSTRUCTION DOCUMENTS 100%

No	REVISION	DATE
1	AMENDMENT #4	05.12.16

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STAMP/SEAL: I HEREBY CERTIFY THAT THIS PLAN SPECIFICATION OR REPORT WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.

Aaron R. Mueller, PE — LIC. NO. MN 46184 — DATE: 12/03/14

DRAWING TITLE: FIRST FLOOR POWER PLAN

PROJECT TITLE: CONSTRUCT NEW IT CENTER FOR HEALTH CARE TECHNOLOGY MANAGEMENT EXPANSION

DESIGNED: NEW IT | CHECKED BY: RSB | DRAWN: ARM

LOCATION: ST. CLOUD VA HCS, ST. CLOUD, MN 56303

DATE: 04.01.15

PLOT SCALE: AS NOTED

PROJECT NO: 556-13-240

CAD FILE:

DRAWING NO: E402

St. Cloud VA Health Care System
Brainerd | Montevideo | Alexandria

VA FORM 08 - 6231

LUMINAIRE SCHEDULE

ID TAG	TYPE	INPUT LOAD	MOUNTING	LIGHT SOURCE	VOLTAGE/BALLAST	DESCRIPTION	COLOR	APPROVED MANUFACTURER
A	2X4 ARCHITECTURAL LED TROFFER	40 VA	RECESSED	LED, 4000 MIN. DELIVERED LUMENS, 3,500K, CRI OF 90+	MULTIVOLT/ELECTRONIC DIMING	20-GAUGE STEEL HOUSING, FIELD REPLACEABLE LIGHT ENGINE, POWER SUPPLY, THERMAL MANAGEMENT, AND POSTICAL MIXING COMPONENTS, ONE-PIOECE LOWER REFLECTOR WITH A TEXTURED HIGH REFLECTANCE WHITE POLYESTER POWDER COATING, DIFFUSING LENS INTEGRATED WITH UPWARD-FACING LED STRIP TO ELIMINATE DIRECT VIEW OF LEDS WITH LOWER REFLECTOR.	WHITE	CRE24 SERIES, OR EQUAL
B	6" DOWNLIGHT	25 VA	RECESSED	LED 1700 LUMENS	120V	OPEN CLEAR		GOTHAM LIGHTING EVO SERIES, OR EQUAL
C	EXTERIOR WALL	27 VA	WALL	LED (1) 21 LED LIGHT/BAR 80CRI	120V	TWO PIECE, DIE CAST ALUMINUM HOUSING AND REMOVABLE HINGED DOOR FRAME, TYPE 4 DIST., BRONZE IN COLOR, INTEGRAL PHOTOCELL	BRONZE	COOPER ISW IMPACT ELITE SMALL WEDGE SERIES, OR EQUAL
D1	4' LED STRIPLIGHT	43 VA	CHAIN HUNG	LED, 3000 DELIVERED LUMENS, 4000K	120V/ELECTRONIC	CODE-GAUGE COLD ROLLED STEEL HOUSING CHANNEL, SNAP ON/OFF LENS DIFFUSER, TOOLLESS CHANNEL COVER REMOVAL	WHITE	LITHONIA ZL2N SERIES, OR EQUAL
D2	4' LED STRIPLIGHT	43 VA	SURFACE MOUNT	LED, 3000 DELIVERED LUMENS, 4000K	120V/ELECTRONIC	CODE-GAUGE COLD ROLLED STEEL HOUSING CHANNEL, SNAP ON/OFF LENS DIFFUSER, TOOLLESS CHANNEL COVER REMOVAL	WHITE	LITHONIA ZL2N SERIES, OR EQUAL
E2	EXIT SIGN W/EMERGENCY LIGHTING	6 VA	UNIVERSAL	LED	120V	TERMOPLASTIC IMPACT RESISTANT, SCRATCH RESISTANT, CORROSION RESISTANT HOUSING, LED LAMP HEADS	WHITE W/RED LETTERING	LITHONIA LHQM SERIES, SURE-LITE APCH7R, OR EQUAL
EX1	EXIT SIGN	6 VA	UNIVERSAL	LED	120V	DIE CAST, BRUSHED ALUMINUM FACE, BLACK HOUSING, RED LETTERS, FACES AND ARROWS AS SHOWN ON PLANS	BRUSHED ALUMINUM FACE, BLACK HOUSING	LITHONIA LE SERIES, OR EQUAL
EX2	EXIT SIGN W/EMERGENCY LIGHTING	6 VA	UNIVERSAL	LED	120V	TERMOPLASTIC IMPACT RESISTANT, SCRATCH RESISTANT, CORROSION RESISTANT HOUSING, LED LAMP HEADS	WHITE W/RED LETTERING	LITHONIA LHQM SERIES, SURE-LITE APCH7R, OR EQUAL
EX3	EXIT SIGN	5 VA	UNIVERSAL	LED	120V	TERMOPLASTIC IMPACT RESISTANT, SCRATCH RESISTANT, CORROSION RESISTANT HOUSING	WHITE HOUSING, RED LETTERING	LITHONIA LQM SERIES, OR EQUAL
F	LED STAIR LIGHT	24 VA	SURFACE/WALL	LED; 2505 DELIVERED LUMENS, 3500K	120V/ELECTRONIC	INTEGRAL OCCUPANY SENSOR TO DIM LIGHT TO 25% ON WHEN UNOCCUPIED AND 100% ON WHEN OCCUPIED, HIGH IMPACT ACRYLIC DIFFUSER, CRESCENT-SHAPE LINEAR FACETED REFRACTOR SYSTEM, CODE GAUGE ROLLED STEEL HOUSING	WHITE POLYESTER POWDER COAT	LITHONIA WL SERIES, OR EQUAL

SWITCHBOARD: 4B-MSB

LOCATION: ELECTRICAL 111 — VOTLS: 480Y/277 — BUSS RATING: 1000 A
ENCLOSURE: NEMA 1 — PHASES: 3 — MAINS TYPE: BREAKER
MOUNTING: FREE STANDING — WIRES: 4 — MAINS RATING: 800 A

CKT	DESCRIPTION	POLES	RATING	LOAD	NOTES
1	4B-ESDP	3	400 A	248,145	100% RATED BREAKER
2	4B-EQDP	3	400 A	226,854	100% RATED BREAKER
3	T-4B-DP	3	20 A	10,871	
4	CU-4	3	20 A	9,650	
5	CU-7	3	15 A	5,000	
6	CU-8	3	20 A	9,650	
7	AHU-1	3	15 A	1,000	
8	AHU-2	3	15 A	1,000	
9	AHU-3	3	20 A	1,000	
10	AHU-4	3	15 A	1,500	
11	SPARE	3	100 A		
12	SPARE	3	20 A		
13					
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34					
35					
36					
			TOTAL CONNECTED LOAD	514670	TOTAL CALCULATED LOAD: 620 AMPS

NOTES:
1. 100% RATED MAIN BREAKER
2. PROVIDE INTEGRAL SPD

MOTOR AND EQUIPMENT SCHEDULE

EQUIPMENT ID	LOCATION	EQUIPMENT DATA HP	FLA	KW	MOP	VOLTS	PHASE	DISCONNECT PROVIDED BY	AMPS/POLES	FUSES	LOCATION	STARTER DATA PROVIDED BY	TYPE/SIZE	LOCATION	FEEDER SIZE	NOTES
AC-1	ELECTRICAL RM 111		19.8	-----	25	480	3	-----	-----	-----	-----	-----	-----	-----	0.75"C-3#10,1#10G	
AHU-1	MECHANICAL RM 113		1.0	-----	15	480	3	MECH	-----	-----	-----	-----	-----	-----	0.75"C-3#12,1#12G	-----
AHU-2	MECHANICAL RM 113		1	-----	15	480	3	MECH	-----	-----	-----	-----	-----	-----	0.75"C-3#12,1#12G	-----
AHU-3	MECH ROOM 002		1.0	-----	15	480V	3	MECH	-----	-----	-----	MECH	-----	-----	0.75"C-3#12,1#12G	-----
AHU-4	MECH RM 2 008		1.75	-----	15	480V	3	MECH	-----	-----	-----	MECH	-----	-----	0.75"C-3#12,1#12G	-----
CLS-1	MECHANICAL ROOM 002		-----	-----	-----	120V	1	ELEC	M	-----	AT UNIT	-----	-----	-----	0.75"C-2#12,1#12G	-----
CRAC-1	MECHANICAL RM 3		59.6	-----	80	480	3	MECH	-----	-----	AT UNIT	MECH	-----	-----	1"C-3#3,1#8G	-----
CRAC-2	MECHANICAL RM 3		59.6	-----	80	480	3	MECH	-----	-----	AT UNIT	MECH	-----	-----	1"C-3#3,1#8G	-----
CRAC-3	MECHANICAL RM 3		59.6	-----	80	480	3	MECH	-----	-----	AT UNIT	MECH	-----	-----	1"C-3#3,1#8G	-----
CU-1	EXTERIOR		5.6	-----	15	480V	3	MECH	-----	-----	AT UNIT	MECH	-----	-----	0.75"C-3#12,1#12G	-----
CU-2	EXTERIOR		5.6	-----	15	480V	3	MECH	-----	-----	AT UNIT	MECH	-----	-----	0.75"C-3#12,1#12G	-----
CU-3	EXTERIOR		4656	-----	15	480V	3	MECH	-----	-----	AT UNIT	MECH	-----	-----	0.75"C-3#12,1#12G	-----
CU-4	EXTERIOR		11.6	-----	20	480	3	ELEC	30A/3P	-----	NEAR UNIT	MECH	-----	-----	0.75"C-3#12,1#12G	-----
CU-5	EXTERIOR		11.7	-----	20	480	3	MECH	-----	-----	-----	MECH	-----	-----	0.75"C-3#12,1#12G	-----
CU-6	EXTERIOR		12.4	-----	20	208V	1	ELEC	30A/3P	-----	AT UNIT	MECH	-----	-----	0.75"C-2#12,1#12G	-----
CU-7	EXTERIOR		6	-----	15	480V	3	ELEC	30A/3P	-----	AT UNIT	MECH	-----	-----	0.75"C-3#12,1#12G	-----
CU-8	EXTERIOR		11.6	-----	20	480	3	ELEC	30A/3P	-----	AT UNIT	MECH	-----	-----	0.75"C-3#12,1#12G	-----
CUH-1	ENTRY 101		-----	-----	15	120V	1	ELEC	-----	-----	AT UNIT	MECH	-----	-----	0.75"C-2#12,1#12G	-----
CUH-2	STAIRWELL-2 RM 115-2		-----	-----	15	120V	1	ELEC	-----	-----	AT UNIT	MECH	-----	-----	0.75"C-2#12,1#12G	-----
CUH-3	BASEMENT BUILDLING 4		-----	-----	15	120V	1	ELEC	-----	-----	AT UNIT	MECH	-----	-----	0.75"C-2#12,1#12G	-----
P-1	MECHANICAL ROOM 002		-----	-----	15A	120V	1	-----	-----	-----		ELEC	MS	AT UNIT	0.75"C-2#12,1#12G	-----
P-2	MECHANICAL ROOM 002		-----	-----	15A	120V	1	-----	-----	-----		ELEC	MS	AT UNIT	0.75"C-2#12,1#12G	-----
RPB-1	MECHANICAL RM 3		7.0	-----	15	480V	3	MECH	-----	-----	AT UNIT	MECH	-----	-----	0.75"C-3#12,1#12G	-----
RPB-2	MECHANICAL RM 3		7.0	-----	15	480V	3	MECH	-----	-----	AT UNIT	MECH	-----	-----	0.75"C-3#12,1#12G	-----
RPB-3	MECHANICAL RM 3		7.0	-----	15	480V	3	MECH	-----	-----	AT UNIT	MECH	-----	-----	0.75"C-3#12,1#12G	-----
SP-1	UTILITY RM 001		-----	-----	15A	120V	1	MECH	-----	-----	AT UNIT	MECH	-----	AT UNIT	0.75"C-2#12,1#12G	-----
SP-2	UTILITY RM 001		-----	-----	15A	120V	1	MECH	-----	-----	AT UNIT	MECH	-----	AT UNIT	0.75"C-2#12,1#12G	-----
UH-1	MECHANICAL RM 3		-----	.2	-----	120	1	ELEC	-----	-----	NEAR UNIT	-----	-----	-----	0.75"C-2#12,1#12G	-----

NOTES:
1. -----

LEGEND:
FRAC = FRACTIONAL HORSEPOWER
MS = MANUAL MOTOR STARTER
VFD = VARIABLE FREQUENCY DRIVE
SSRV = SOLID STATE REDUCED VOLTAGE STARTER
FVNR = FULL VOLTAGE NON-REVERSING STARTER
M = MOTOR RATED SWITCH
MANUF = PROVIDE FUSES PER MANUFACTURER RECOMMENDATIONS
MECH = PROVIDED BY EQUIPMENT SUPPLIER OR WITH EQUIPMENT
ELEC = PROVIDED UNDER DIVISION 26

PANELBOARD SCHEDULE

NAME: 4B-L1 — CIRCUIT BREAKER: X — MAIN RATING: 100A
LOCATION: ELECTRICAL ROOM — MAIN LUGS ONLY: — VOLTAGE: 208Y/120
MOUNTING: SURFACE — WIRES: 4 — PHASE: 3

CKT	CIRCUIT DESCRIPTION	TRIP	POLES	A		B		C		POLES	TRIP	CIRCUIT DESCRIPTION	CKT
1	R. EXTERIOR	20 A	1	540	1260					1	20 A	R. RM 6	2
3	R. RMS 001, 002, 003	20 A	1			900	540			1	20 A	R. RM 16	4
5	L. RMS 105, 111, 113	20 A	1					381	540	1	20 A	R. RM. 17	6
7	L. RMS 001, 002, 003, 023	20 A	1	645	540					1	20 A	R. RM 111, 113	8
9	CU-6	20 A	2			1290	1500			1	20 A	DEMARC RM LIGHTNING ARRESTORS	10
11								1290	0	1	20 A	SPARE	12
13	CABINET UNIT HEATERS CUH-1, CUH-2	20 A	1	1000	0					1	20 A	SPARE	14
15	SPARE	20 A	1			0	0			1	20 A	SPARE	16
17	SPARE	20 A	1					0	0	1	20 A	SPARE	18
19	SPARE	20 A	1	0	0					1	20 A	SPARE	20
21	SPARE	20 A	1			0	0			1	20 A	SPARE	22
23	SPARE	20 A	1					0	0	1	20 A	SPARE	24
25	SPARE	20 A	1	0	0					1	20 A	SPARE	26
27	SPARE	20 A	1			0	0			1	20 A	SPARE	28
29	SPARE	20 A	1					0	0	1	20 A	SPARE	30
31	SPARE	20 A	1	0	0					1	20 A	SPARE	32
33	SPACE	--	--			0	0			--	--	SPACE	34
35	SPACE	--	--					0	0	--	--	SPACE	36
37	SPACE	--	--	0	0					--	--	SPACE	38
39	SPACE	--	--			0	0			--	--	SPACE	40
41	SPACE	--	--					0	0	--	--	SPACE	42
	TOTAL CONNECTED LOAD 10425 VA			TOTAL CALCULATED DEMAND 10871								TOTAL CALCULATED AMPS 30	

GENERAL NOTES:
1.
2.
3.

KEY NOTES:
* GFCI RATED BREAKER
** PROVIDE HACR RATED BREAKER
*** ISOLATED GROUND CIRCUIT

CONSTRUCTION DOCUMENTS 100%

No	REVISION	DATE
1	AMENDMENT #4	05.12.16

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Aaron R. Mueller, PE — LIC. NO. 44184 — DATE: 12/03/14

DRAWING TITLE: ELECTRICAL SCHEDULES

PROJECT NO: CONSTRUCT NEW IT CENTER FOR HEALTH CARE TECHNOLOGY MANAGEMENT EXPANSION
BUILDING: NEW IT — CHECKED BY: RSB — DRAWN: ARM
LOCATION: ST. CLOUD VA HCS, ST. CLOUD, MN 56303

DATE: 04.01.15
PLOT SCALE: AS NOTED
PROJECT NO: 059-15-240
CAD FILE:
DRAWING NO: E901

St. Cloud VA Health Care System
Brainerd | Montevideo | Alexandria

VA FORM 08-6231

PANELBOARD SCHEDULE

NAME:	4B-ESDP	CIRCUIT BREAKER:	X	MAIN RATING:	400
LOCATION:	ELECTRICAL RM 111	MAIN LUGS ONLY:		VOLTAGE:	480Y/277
MOUNTING:	SURFACE	WIRES:	4	PHASE:	3

CKT	CIRCUIT DESCRIPTION	TRIP	POLES	A		B		C		POLES	TRIP	CIRCUIT DESCRIPTION	CKT
1				81200	2147								2
3	UPS AC RECTIFIER INPUT	350 A	3			81200	1484			3	25 A	T-4B-ES	4
5								81200	2000				6
7				0	0								8
9	SPARE	20 A	3			0	0			3	20 A	SPARE	10
11								0	0				12
13	SPACE	--	--	0	0					--	--	SPACE	14
15	SPACE	--	--			0	0			--	--	SPACE	16
17	SPACE	--	--					0	0	--	--	SPACE	18
19	SPACE	--	--	0	0					--	--	SPACE	20
21	SPACE	--	--			0	0			--	--	SPACE	22
23	SPACE	--	--					0	0	--	--	SPACE	24
25	SPACE	--	--	0	0					--	--	SPACE	26
27	SPACE	--	--			0	0			--	--	SPACE	28
29	SPACE	--	--					0	0	--	--	SPACE	30
	TOTAL CONNECTED LOAD 249231 VA			TOTAL CALCULATED DEMAND 248145								TOTAL CALCULATED AMPS 298	

GENERAL NOTES:

1. PROVIDE INTEGRAL SPD
2. 100% RATED MAIN BREAKER
3.

KEY NOTES:

* GFCI RATED BREAKER

** PROVIDE HACR RATED BREAKER

*** ISOLATED GROUND CIRCUIT

PANELBOARD SCHEDULE

NAME:	4B-EQDP	CIRCUIT BREAKER:	X	MAIN RATING:	400
LOCATION:	ELECTRICAL RM 111	MAIN LUGS ONLY:		VOLTAGE:	480Y/277
MOUNTING:	SURFACE	WIRES:	4	PHASE:	3

CKT	CIRCUIT DESCRIPTION	TRIP	POLES	A		B		C		POLES	TRIP	CIRCUIT DESCRIPTION	CKT
1				0	16667								2
3	SPARE	20 A	3			0	16667			3	80 A	CRAC-1	4
5								0	16667				6
7				1940	16667								8
9	RPB-1	15 A	3			1940	16667			3	80 A	CRAC-2	10
11								1940	16667				12
13				1940	16667								14
15	RPB-2	15 A	3			1940	16667			3	80 A	CRAC-3	16
17								1940	16667				18
19				1940	1552								20
21	RPB-3	15 A	3			1940	1552			3	15 A	CU-1	22
23								1940	1552				24
25				5487	1552								26
27	AC-1	25 A	3			5487	1552			3	15 A	CU-2	28
29								5487	1552				30
31				0	1552								32
33	SPARE	15 A	3			0	1552			3	15 A	CU-3	34
35								0	1552				36
37				4700	3215								38
39	T-4B-EQ	20 A	3			1920	3215			3	20 A	CU-5	40
41								5320	3215				42
	TOTAL CONNECTED LOAD 228794 VA			TOTAL CALCULATED DEMAND 226714								TOTAL CALCULATED AMPS 273	

GENERAL NOTES:

1. PROVIDE INTEGRAL SPD
2. 100% RATED MAIN BREAKER
3.

KEY NOTES:

* GFCI RATED BREAKER

** PROVIDE HACR RATED BREAKER

*** ISOLATED GROUND CIRCUIT

PANELBOARD SCHEDULE

NAME:	4B-ES	CIRCUIT BREAKER:	X	MAIN RATING:	60
LOCATION:	ELECTRICAL RM 111	MAIN LUGS ONLY:		VOLTAGE:	208Y/120
MOUNTING:	SURFACE	WIRES:	4	PHASE:	3

CKT	CIRCUIT DESCRIPTION	TRIP	POLES	A		B		C		POLES	TRIP	CIRCUIT DESCRIPTION	CKT
1	L. RMS 001	20 A	1	356	291					1	20 A	L. RM 107	2
3	L. RMS 101,103-2, 111, 113, 115-2	20 A	1			403	81			1	20 A	L. EXTERIOR	4
5	CLEAN AGENT CONTROL PANEL	20 A	1					1000	500	1	20 A	JOHNSON CONTROLS PANEL	6
7	EARLY WARNING AIR SAMPLING CONTROL PANEL 1	20 A	1	1000	0					1	20 A	SPARE	8
9	EARLY WARNING AIR SAMPLING CONTROL PANEL 1	20 A	1			1000	0			1	20 A	SPARE	10
11								500	0	1	20 A	SPARE	12
13	PA SYSTEM EQUIPMENT	20 A	2	500	0					1	20 A	SPARE	14
15	SPARE	20 A	1			0	0			1	20 A	SPARE	16
17	SPARE	20 A	1					0	0	1	20 A	SPARE	18
19	SPARE	20 A	1	0	0					1	20 A	SPARE	20
21	SPARE	20 A	1			0	0			1	20 A	SPARE	22
23	SPARE	20 A	1					0	0	1	20 A	SPARE	24
25	SPARE	20 A	1	0	0					1	20 A	SPARE	26
27	SPARE	20 A	1			0	0			1	20 A	SPARE	28
29	SPARE	20 A	1					0	0	1	20 A	SPARE	30
	TOTAL CONNECTED LOAD 5631 VA			TOTAL CALCULATED DEMAND 4545								TOTAL CALCULATED AMPS 13	

GENERAL NOTES:

1.
2.
3.

KEY NOTES:

* GFCI RATED BREAKER

** PROVIDE HACR RATED BREAKER

*** ISOLATED GROUND CIRCUIT

PANELBOARD SCHEDULE

NAME:	4B-EQ	CIRCUIT BREAKER:	X	MAIN RATING:	200
LOCATION:	ELECTRICAL RM 111	MAIN LUGS ONLY:		VOLTAGE:	208Y/120
MOUNTING:	SURFACE	WIRES:	4	PHASE:	3

CKT	CIRCUIT DESCRIPTION	TRIP	POLES	A		B		C		POLES	TRIP	CIRCUIT DESCRIPTION	CKT
1	R. RM 6	20 A	1	720	360					1	20 A	R. RM 113,002, 105	2
3	R. RM. 16	20 A	1			360	360			1	20 A	R. RM 4	4
5	MECHANICAL ROOM 002 HW AND GLYCOL PUMPS	20 A	1					1000	360	1	20 A	R. RM 16	6
7	SUMP PUMP SP-1	20 A	1	1000	360					1	20 A	R. RM. 16	8
9	SUMP PUMP SP-1	20 A	1			1000	200			1	20 A	UH-1	10
11	R. RMS 002, 003, 004	20 A	1					540	440	1	20 A	L. RMS 107, 109	12
13	DOOR ELECTRIC STRIKES	20 A	1	500	180					1	20 A	RM 003 CENTURYLINK EQUIPMENT	14
15	SECURITY CONTROL	20 A	1			500	0			1	20 A	SPARE	16
17	CLS-1	20 A	1					900	0	1	20 A	SPARE	18
19	SPARE	20 A	1	0	0					1	20 A	SPARE	20
21	SPARE	20 A	1			0	2080			2	25 A	DC POWER CONVERTER RECTIFIER 1	22
23	SPARE	20 A	1					0	2080				24
25	SPARE	20 A	1	0	2080					2	25 A	DC POWER CONVERTER RECTIFIER 1	26
27	SPARE	20 A	1			0	2080						28
29	SPARE	20 A	1					0	2080	2	25 A	DC POWER CONVERTER RECTIFIER 1	30
31	SPARE	20 A	1	0	2080								32
33	SPARE	20 A	1			0	0			1	20 A	SPARE	34
35	SPARE	20 A	1					0	0	1	20 A	SPARE	36
37	SPARE	20 A	1	0	0					1	20 A	SPARE	38
39	SPARE	20 A	1			0	0			1	20 A	SPARE	40
41	SPARE	20 A	1					0	0	1	20 A	SPARE	42
	TOTAL CONNECTED LOAD 21260 VA			TOTAL CALCULATED DEMAND 19320								TOTAL CALCULATED AMPS 53	

GENERAL NOTES:

1.
2.
3.

KEY NOTES:

* GFCI RATED BREAKER

** PROVIDE HACR RATED BREAKER

*** ISOLATED GROUND CIRCUIT

CONSTRUCTION DOCUMENTS 100%

No	REVISION	DATE
1	AMENDMENT #4	05.12.16

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Aaron E. Mueller, PE — MN 46184 — REG. NO.

DATE: 12/03/14

DRAWING TITLE: ELECTRICAL SCHEDULES

PROJECT NO: 050-13-240

DATE: 04.01.15

PLOT SCALE: AS NOTED

BUILDING: NEW IT

CHECKED BY: RSB

DRAWN: ARM

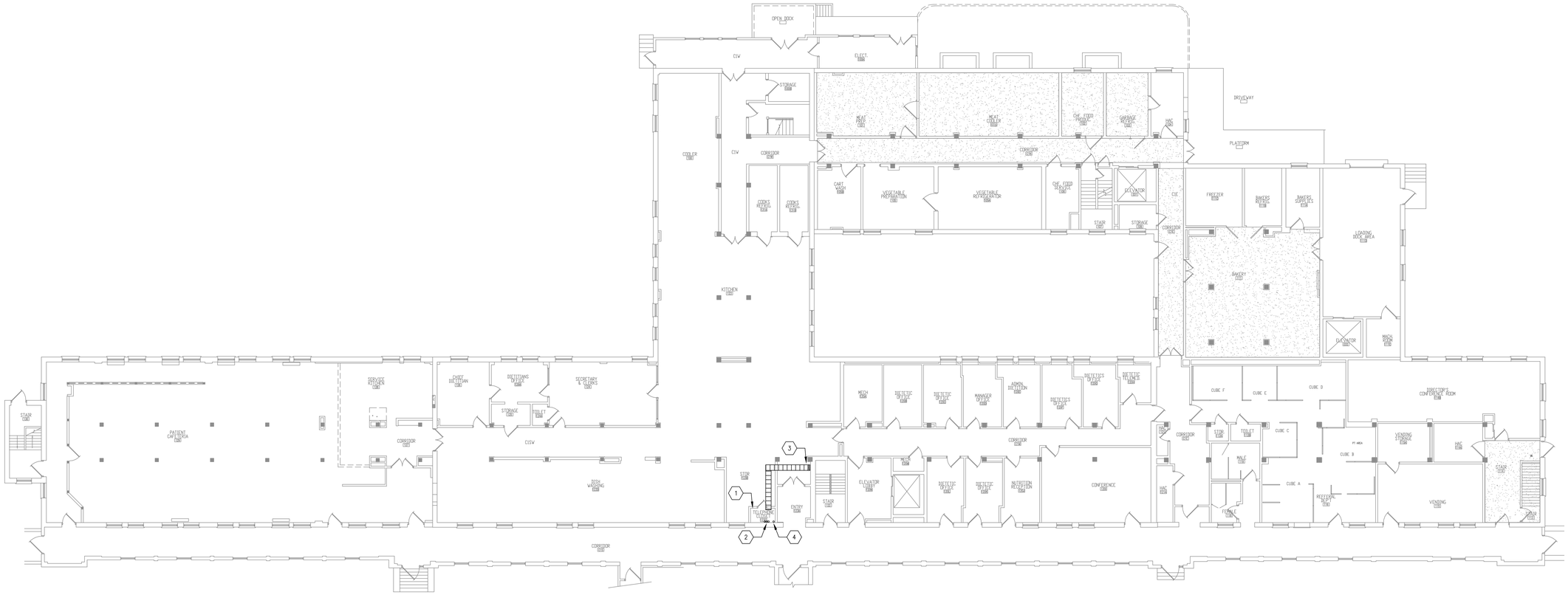
CAD FILE:

LOCATION: ST. CLOUD VA HCS, ST. CLOUD, MN 56303

DRAWING NO: E902

St. Cloud VA Health Care System
Brainerd | Montevideo | Alexandria

VA FORM 08-6231



GENERAL NOTES

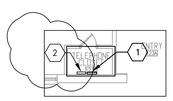
1. REMOVE ALL CONDUITS WHICH ARE NOT CONCEALED AND BECOME ABANDONED AFTER REMOVAL OF CABLING.
2. REPLACE AND REPAIR ALL FIRE STOPPING IN CONDUITS.
3. PROVIDE ALL OPENINGS THROUGH WALLS REQUIRED FOR NEW CONDUIT AND CABLING. PROVIDE FIRE STOPPING IN OPENINGS THROUGH FIRE RATED WALLS AND SMOKE COMPARTMENTS.
4. REFER TO I.T. DOCUMENTS FOR CABLING REQUIREMENTS.

(X) KEYNOTES

1. EXISTING TELECOM/DATA ROOM 123C.
2. EXISTING THREE (3) 4" CONDUITS FROM BASEMENT LEVEL TELECOM ROOM. MIDDLE CONDUIT IS EMPTY. USE THIS CONDUIT FOR CABLING BETWEEN BASEMENT LEVEL TELECOM AND FIRST FLOOR TELECOM/DATA ROOMS.
3. EXISTING CABLE TRAY ABOVE CEILING RAN TO THREE (3) 4" CONDUITS THROUGH CEILING TO SECOND FLOOR TELECOM/DATA ROOM. MIDDLE CONDUIT IS EMPTY. USE THIS CABLE TRAY AND CONDUIT FOR CABLING BETWEEN FIRST FLOOR AND SECOND FLOOR TELECOM/DATA ROOMS.
4. PROVIDE ONE (1) 4" CONDUIT FROM FIRST FLOOR TELECOM/DATA ROOM TO THE CABLE TRAY LOCATED IN THE STEAM TUNNEL BELOW.

N 1 CP4-1 BUILDING 4 CABLING PLAN - FIRST FLOOR

SCALE = 3/32"=1'-0"



GENERAL NOTES

1. PROVIDE – TO FURNISH AND INSTALL, COMPLETE AND READY FOR INTENDED USE.
2. COORDINATE WITH OWNER LOCATION AND ELEVATION OF FIBER OPTIC PATCH PANELS IN EACH TELECOM/DATA ROOM.

(X) KEYNOTES

1. PROVIDE NEW 110 BLOCKS AT 5' AFF AND NEW CABLES PER COPPER BACKBONE DIAGRAM.
2. PROVIDE NEW WALL MOUNTED FIBER OPTIC PATCH PANELS AND NEW CABLES PER FIBER OPTIC BACKBONE DIAGRAM.

N 2 CP4-1 IT PLAN - ROOM 123C

SCALE = 1/8"=1'-0"

CONSTRUCTION DOCUMENTS 100%

No	REVISION	DATE
1	AMENDMENT #4	05.12.16

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Aaron R. Mueller, PE
DATE: 12-03-14
MN 46184
REG. NO.

APPROVED: PROJECT DIRECTOR — DATE:

DRAWING TITLE: BUILDING 4 CABLING PLAN - FIRST FLOOR

PROJECT TITLE: CONSTRUCT NEW IT CENTER FOR HEALTH CARE TECHNOLOGY MANAGEMENT EXPANSION

BUILDING No.: AS NOTED
CHECKED BY: ARM
DRAWN: RSB
LOCATION: ST. CLOUD VA MEDICAL CENTER ST. CLOUD, MN 56303

DATE: 04.01.15
FIRST ISSUE: AS NOTED
PROJECT NO.: 655-13-240
CAD FILE: XXX
DRAWING NO.: CP4-1

St. Cloud VA Health Care System
Brainerd | Montevideo | Alexandria

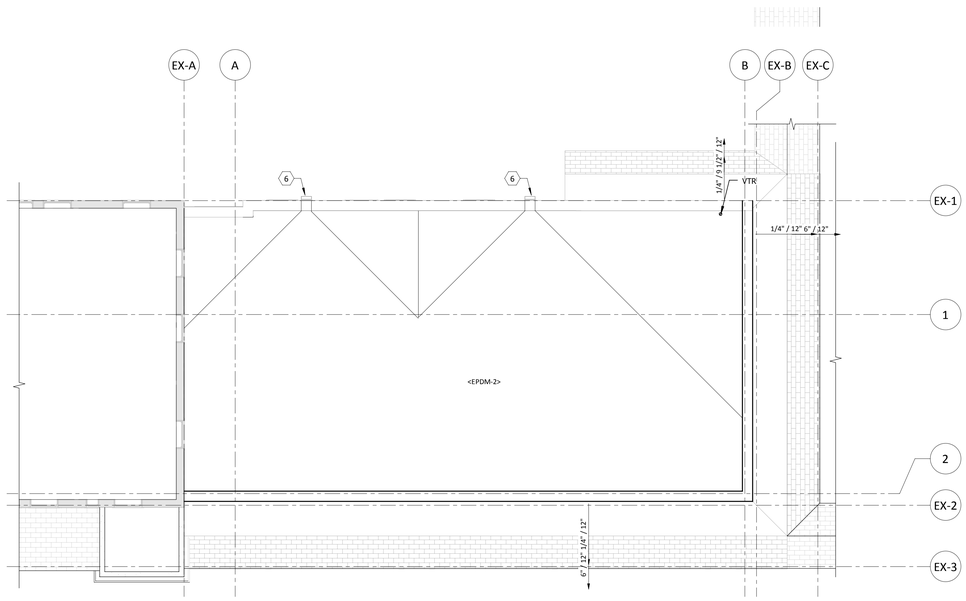
VA FORM 08 - 6231

GENERAL NOTES

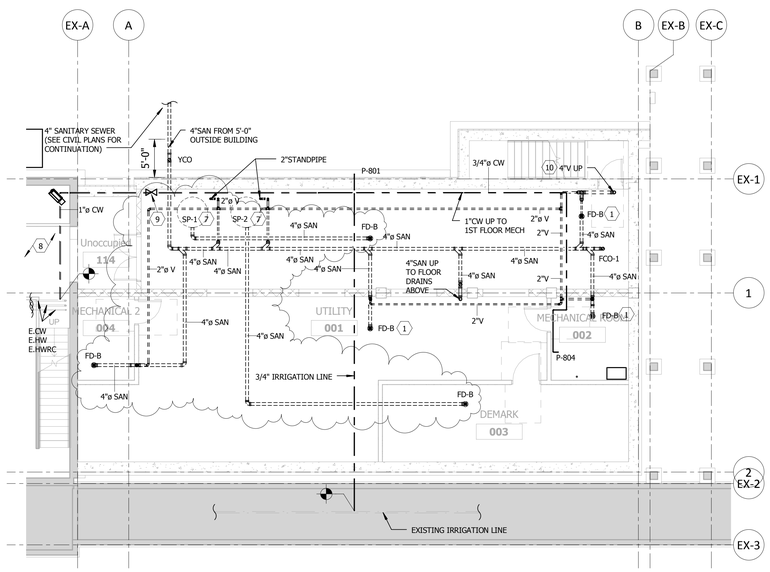
1. ALL ISOLATION VALVES SHALL BE LOCATED IN ACCESSIBLE LOCATIONS.
2. COORDINATE UNDERGROUND PIPING SYSTEMS WITH FOUNDATION CONTRACTOR PRIOR TO INSTALLATION.
3. SEE PLUMBING FIXTURE SCHEDULE FOR INDIVIDUAL PLUMBING FIXTURE CONNECTION SIZE REQUIREMENTS.
4. SEE SHEET M202 FOR ALL DRAIN, WASTE, VENT AND DOMESTIC WATER PIPING ISOMETRICS.
5. COORDINATE ALL PLUMBING PIPING WITH HVAC AND ELECTRICAL EQUIPMENT.
6. PLUMBING CONTRACTOR SHALL FIELD VERIFY ALL EXISTING CONDITIONS.
7. ALL PLUMBING FIXTURES SHALL HAVE INDIVIDUAL SHUT-OFF VALVES.
8. FLASH AND SEAL ALL ROOF PENETRATIONS TO MAKE WATERTIGHT.
9. CHANGES IN DIRECTION IN DRAINAGE PIPING MUST BE MADE BY APPROPRIATE WYES AND BENDS. SANITARY TEES ARE NOT ALLOWED WHERE THE DIRECTION OF FLOW CHANGES FROM EITHER VERTICAL TO HORIZONTAL OR HORIZONTAL TO HORIZONTAL.

KEYNOTES

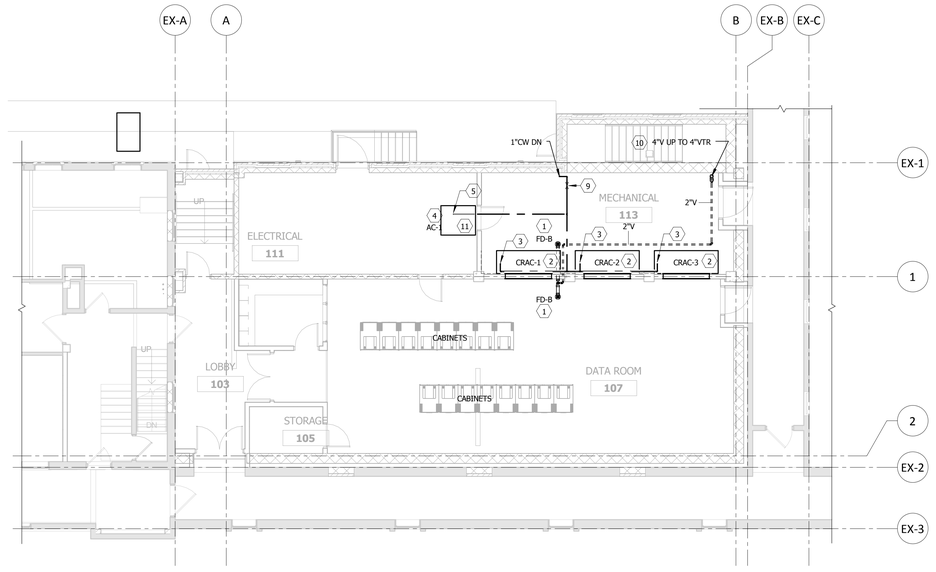
1. COORDINATE FLOOR DRAIN LOCATION WITH HVAC & PLUMBING EQUIPMENT.
2. VERIFY PLUMBING REQUIREMENTS OF CRAC UNITS PRIOR TO INSTALLATION.
3. 3/4"CW TO CRAC UNIT. PROVIDE APPROVED BACKFLOW PREVENTER AS REQUIRED BY CODE.
4. VERIFY PLUMBING REQUIREMENTS OF AC-1 UNIT PRIOR TO INSTALLATION.
5. 1/2"CW TO AC-1 UNIT. PROVIDE APPROVED BACKFLOW PREVENTER AS REQUIRED BY CODE.
6. PRIMARY AND SECONDARY ROOF STORM DRAINAGE RAN THROUGH SCUPPERS.
7. SP-1 & SP-2 SHALL SEND ALARM TO BUILDING MANAGEMENT SYSTEM FOR PUMP OPERATION. A SECOND ALARM FOR OVERFLOW. ALARMS BY JCI.
8. NO CONNECTIONS TO EXISTING SANITARY SHALL BE MADE DUE TO POOR EXISTING CONDITIONS.
9. CW SHUT-OFF VALVE WITH TAMPER SWITCH SHALL BE READILY ACCESSIBLE AND NOT LOCKED. TAMPER SWITCH SHALL SEND ALARM TO BUILDING MANAGEMENT SYSTEM. ALARMS BY JCI.
10. COORDINATE VENT STACK LOCATIONS WITH MECHANICAL CONTRACTOR PRIOR TO INSTALLATION.
11. AVOID RUNNING CW OVER ELECTRICAL EQUIPMENT.



3 MECHANICAL ROOF PLAN
0 4' 8' 16'



1 PLUMBING BASEMENT PLAN
0 4' 8' 16'



2 PLUMBING FIRST FLOOR PLAN
0 4' 8' 16'

100% CONSTRUCTION DOCUMENTS

No	REVISION	DATE
1	ADDENDUM #4	05-12-16

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Joshua D. Meehl, PE — MN 51522 — REG. NO.
DATE: 12.03.14

DRAWING TITLE: PLUMBING PLANS

PROJECT TITLE: CONSTRUCT NEW IT CENTER FOR HEALTH CARE TECHNOLOGY MANAGEMENT EXPANSION

BUILDING: NEW IT | CHECKED BY: JDM | DRAWN: AJF

LOCATION: ST. CLOUD VA HCS, ST. CLOUD, MN 56303

DATE: 12.03.14

SCALE(S): AS NOTED

PROJECT NO.: 656-14-246

DRAWING NO.: M201

St. Cloud VA Health Care System
Brainerd | Montevideo | Alexandria

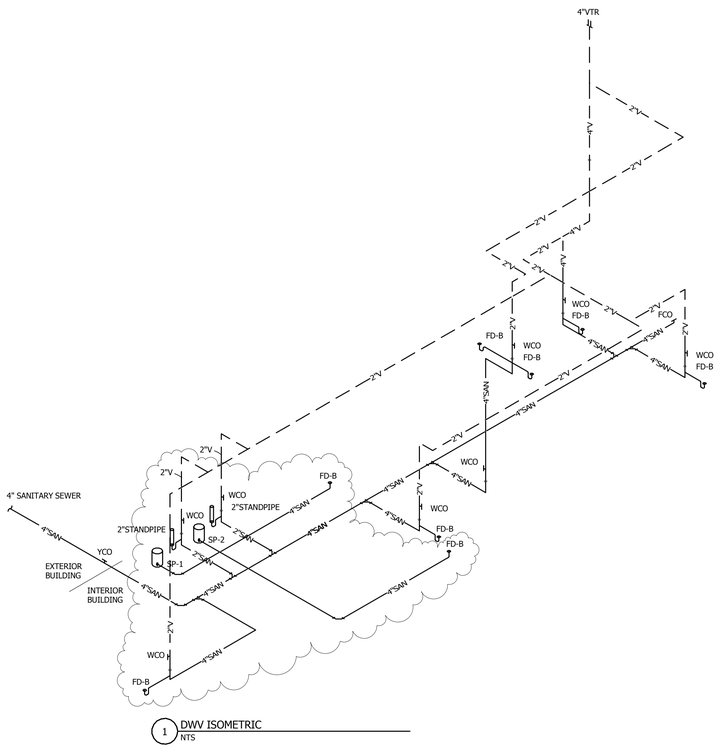
VA FORM 08-6231

GENERAL NOTES

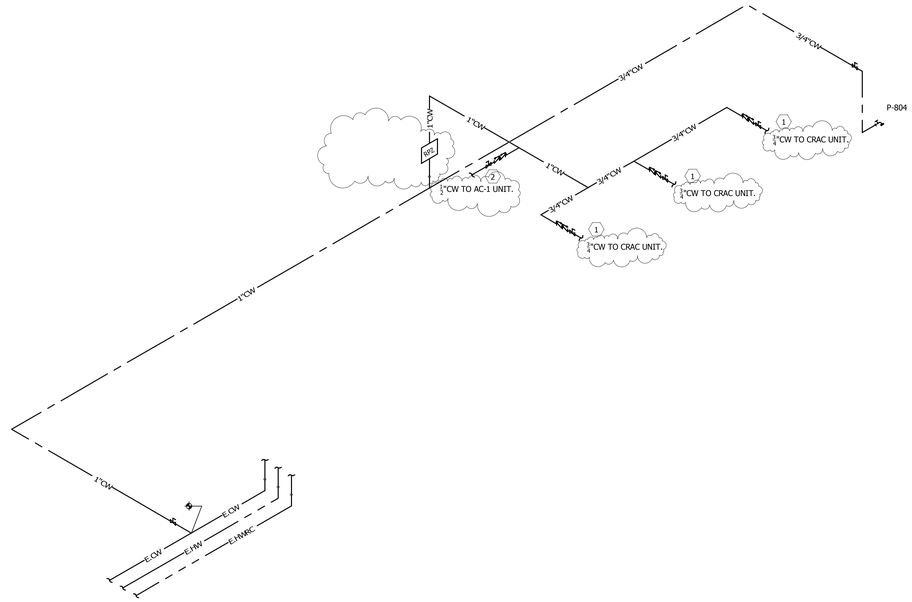
1. ALL ISOLATION VALVES SHALL BE LOCATED IN ACCESSIBLE LOCATIONS.
2. SEE PLUMBING FIXTURE SCHEDULE FOR INDIVIDUAL PLUMBING FIXTURE CONNECTION SIZE REQUIREMENTS.
3. COORDINATE ALL PLUMBING PIPING WITH HVAC AND ELECTRICAL EQUIPMENT.
4. PLUMBING CONTRACTOR SHALL FIELD VERIFY ALL EXISTING CONDITIONS.
5. ALL PLUMBING FIXTURES SHALL HAVE INDIVIDUAL SHUT-OFF VALVES.
6. FLASH AND SEAL ALL ROOF PENETRATIONS TO MAKE WATERTIGHT.
7. CHANGES IN DIRECTION IN DRAINAGE PIPING MUST BE MADE BY APPROPRIATE WYES AND BENDS. SANITARY TEES ARE NOT ALLOWED WHERE THE DIRECTION OF FLOW CHANGES FROM EITHER VERTICAL TO HORIZONTAL OR HORIZONTAL TO HORIZONTAL.

KEYNOTES

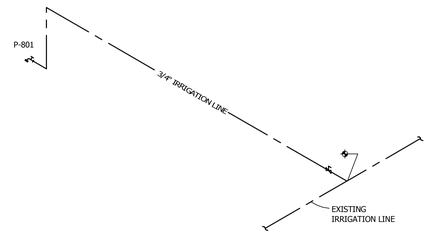
1. VERIFY PLUMBING REQUIREMENTS OF CRAC UNITS PRIOR TO INSTALLATION.
2. VERIFY PLUMBING REQUIREMENTS OF AC-1 UNIT PRIOR TO INSTALLATION.



1 DWV ISOMETRIC
NTS



2 DOMESTIC WATER ISOMETRIC
NTS



3 IRRIGATION LINE ISOMETRIC
NTS

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1	ADDENDUM #4	05-12-16

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Joshua D. Moehl MN 51522
Joshua D. Moehl, PE REG. NO.
DATE: 12.03.14

DRAWING TITLE
PLUMBING ISOMETRICS

PROJECT TITLE
CONSTRUCT NEW IT CENTER FOR HEALTH CARE TECHNOLOGY MANAGEMENT EXPANSION

DATE 12.03.14
SCALE AS NOTED
PROJECT NO. 656-14-246
BUILDING NEW IT
CHECKED BY JDM
DRAWN AJF
CAD FILE
LOCATION ST. CLOUD VA HCS ST. CLOUD, MN 56303
DRAWING NO. M202

St. Cloud VA Health Care System
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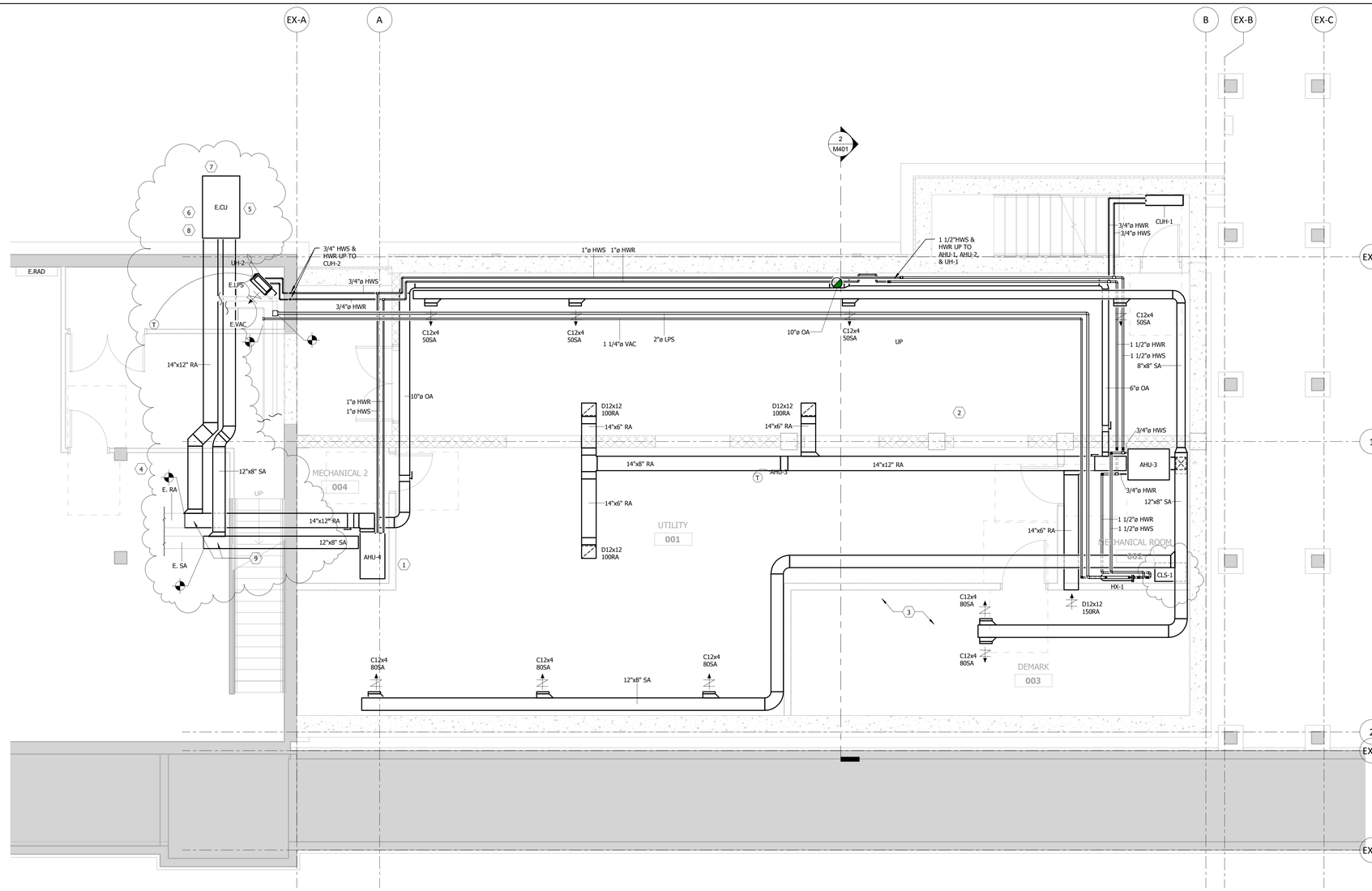
VA FORM 08-6231



1 HVAC BASEMENT PLAN

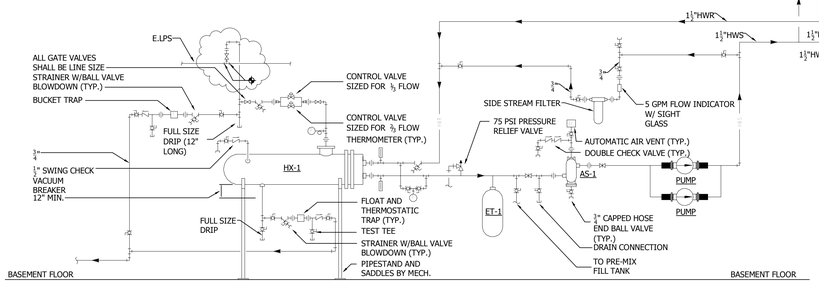
0 2' 4' 8'

GENERAL NOTES

1. INSTALL VOLUME DAMPERS AS REQUIRED FOR AIR BALANCE.
2. INSULATED FLEX DUCT TO BE A MAXIMUM LENGTH OF 5'.
3. FIELD VERIFY ALL EXISTING CONDITIONS.
4. ALL BRANCH DUCT SIZES ARE EQUAL TO THE NECK SIZE OF DIFFUSER UNLESS OTHERWISE NOTED.
5. BALANCE DUCTS AND ADJUST FAN BELT SHEAVES TO MEET AIRFLOW REQUIREMENTS.
6. FIELD VERIFY LOCATION OF EXISTING DUCTS. DEMO EXISTING RTU UNIT. MECHANICAL CONTRACTOR TO PROVIDE TEMPRARAY COOLING TO SPACE SERVED UNITIL INSTALLATION AND STARTUP OF AHU-4. MINIMUM COOLING CAPACITY SHALL BE EQUIVILENT TO AHU-4. COORDINATE WITH CONTRACTOR.

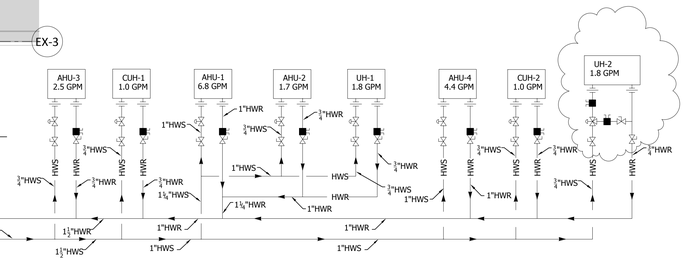
KEYNOTES

1. TIE AHU-4 INTO EXISTING TEMPERATURE CONTROLS.
2. COMBINATION HUMIDISTAT AND THERMOSTAT.
3. COORDINATE DUCTWORK WITH CABLE TRAYS.
4. VERIFY LOCATION OF EXISTING MECHANICAL EQUIPMENT AND COORDINATE RELOCATION WITH ARCHITECT/ENGINEER.
5. RELOCATED EXISTING HVAC EQUIPMENT. RELOCATE AND EXTEND DUCT WORK, INSULATION, HANGERS, SUPPORTS, AND TEMPERATURE CONTROLS. PROVIDE HVAC EQUIPMENT PAD, 4" THICK CONCRETE, 6" LARGER THAN CU FOOT PRINT.
6. PROVIDE INSULATION AND WATER TIGHT SEAL THROUGH PENETRATIONS.
7. RELOCATION OF EXISTING HVAC EQUIPMENT TO OCCUR DURING NON COOLING SEASON, OR AFTER HOURS TO PREVENT INTERRUPTION OF BUILDING OCCUPANT COOLING.
8. REMOVE RELOCATED HVAC EQUIPMENT, DUCT WORK, INSULATION, HANGERS, SUPPORTS, 4" CONCRETE PAD AND TEMPERATURE CONTROLS AFTER AHU-4 IS OPERATIONAL.
9. PROVIDE TEMPORARY DUCTWORK CAPS; REMOVE AND MAKE FINAL CONNECTIONS ONCE AHU-4 IS OPERATIONAL.



NOTE: COORDINATE WITH DDC CONTROLS FOR SENSOR LOCATIONS.

2 MECH-SCHEMATIC
NO SCALE



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No	REVISION	DATE
1	ADDENDUM #4	05-12-16

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Joshua D. Moritz, PE — MN 51522
REG. NO.
DATE: 12.03.14

DRAWING TITLE: HVAC BASEMENT PLAN

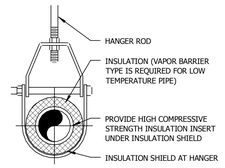
PROJECT TITLE: CONSTRUCT NEW IT CENTER FOR HEALTH CARE TECHNOLOGY MANAGEMENT EXPANSION

DATE: 12.03.14
PLOT SCALE: AS NOTED
PROJECT #: 656-14-246
CAD FILE:
DRAWING NO: M402

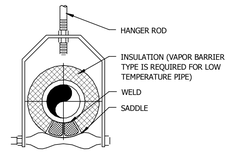
BUILDING: NEW IT
CHECKED BY: JDM
DRAWN: NRW
LOCATION: ST. CLOUD VA HCS ST. CLOUD, MN 56303

St. Cloud VA Health Care System
Brainerd | Montevideo | Alexandria

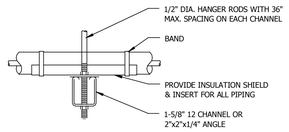
VA FORM 08-6231



ADJUSTABLE CLEVIS HANGER

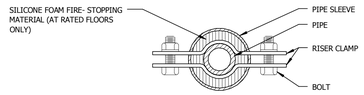


ADJUSTABLE ROLLER HANGER

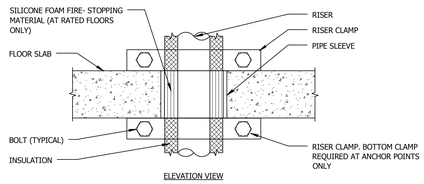


TRAPEZE HANGER
(1000 LB. UNIFORM LOAD MAX.)

1 TYPICAL PIPE HANGER DETAIL
NO SCALE

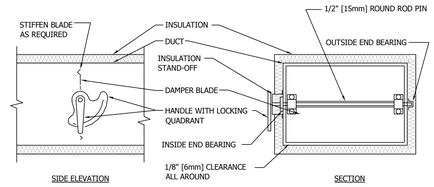


PLAN VIEW



ELEVATION VIEW

2 VERTICAL SUPPORT/ANCHOR FOR PIPE RISER DETAIL
NO SCALE

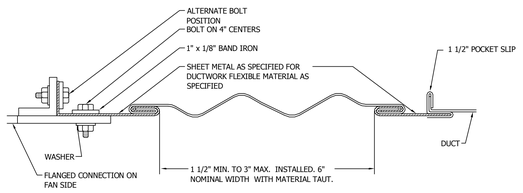


SIDE ELEVATION SECTION

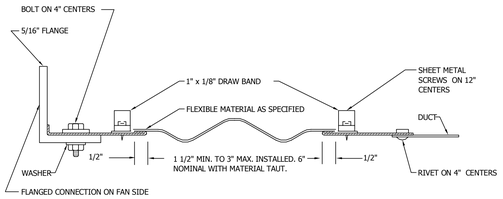
DETAIL NOTES:

1. DELETE INSULATION STAND-OFF ON DUCTWORK WITHOUT EXTERIOR INSULATION.
2. DETAIL SHOWS SINGLE BLADE DAMPER. DAMPER INSULATION SHALL BE SIMILAR FOR MULTI-BLADE DAMPERS & ROUND DAMPERS.

3 VOLUME DAMPER DETAIL
NO SCALE

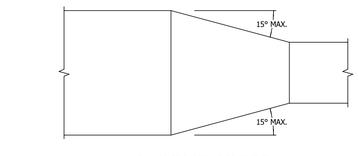


RECTANGULAR FLEXIBLE CONNECTION

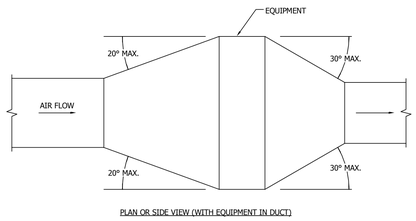


ROUND FLEXIBLE CONNECTION

4 FLEXIBLE DUCT CONNECTION DETAIL
NO SCALE

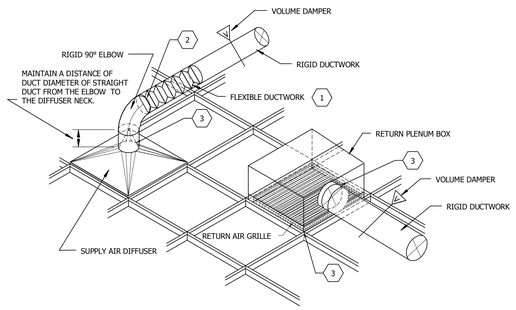


PLAN OR SIDE VIEW (NO EQUIPMENT)



PLAN OR SIDE VIEW (WITH EQUIPMENT IN DUCT)

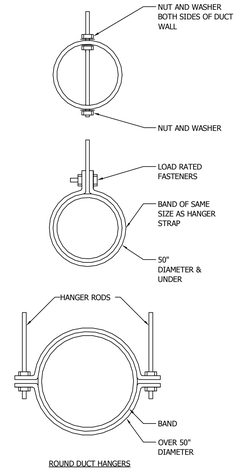
5 DUCT TRANSITION DETAIL
NO SCALE



DETAIL NOTES:

1. CONNECT RIGID DUCTWORK TO RIGID 90° ELBOW WITH 5 FEET MAXIMUM LENGTH OF FLEXIBLE DUCTWORK OR AS LOCAL AUTHORITY HAVING JURISDICTION. MAXIMUM COMPRESSION SHALL BE LESS THAN 10%.
2. FASTEN FLEXIBLE DUCTWORK TO RIGID 90° ELBOW WITH TWO TIE STRAPS.
3. SCREW ALL SEAMS AND SEAL AIRTIGHT.
4. ALL SURFACES VISIBLE FROM OCCUPIED SPACE TO BE PAINTED BLACK.

6 LAY-IN CEILING DIFFUSER/GRILLE ASSEMBLY DETAIL
NO SCALE

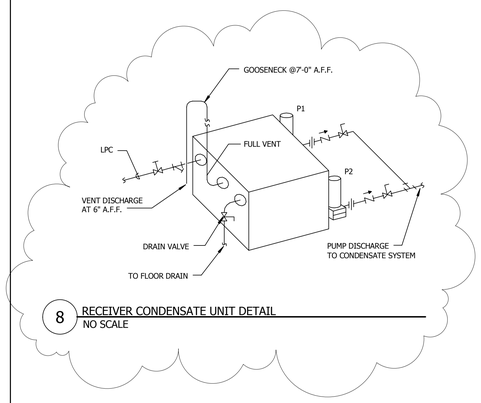


ROUND DUCT HANGERS

DETAIL NOTES:

1. TABULATED DATA FROM SMACNA ALLOWS FOR DUCT REINFORCING AND INSULATION, BUT NO EXTERNAL LOAD.
2. HANG ALL DUCTWORK FROM ROOF JOISTS OR WITH WALL HANGERS.

7 DUCT HANGER DETAIL
NO SCALE



8 RECEIVER CONDENSATE UNIT DETAIL
NO SCALE

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No	REVISION	DATE
1	ADDENDUM #4	05-12-16

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Joshua D. Meehl, PE — REG. NO. MN 51522
DATE: 12.03.14

DRAWING TITLE: MECHANICAL DETAILS

PROJECT TITLE: CONSTRUCT NEW IT CENTER FOR HEALTH CARE TECHNOLOGY MANAGEMENT EXPANSION

DESIGNED by	CHECKED BY	DRAWN
NEW IT	JDM	NRW

LOCATION: ST. CLOUD VA HCS, ST. CLOUD, MN 56303

DATE: 12.03.14
PLOT SCALE: AS NOTED
PROJECT NO: 656-14-246
CAD FILE:
DRAWING NO: M701

St. Cloud VA Health Care System
Brainerd | Montevideo | Alexandria

VA FORM 08-6231

COMPUTER ROOM AIR CONDITIONING (CRAC) UNIT SCHEDULE

UNIT TAG	MFGR.	MODEL	SUPPLY AIR (CFM)	SUPPLY FAN QUANTITY	TOTAL SUPPLY FAN HP	MINIMUM OUTDOOR AIR (CFM)	FILTRATION	TOTAL COOLING CAPACITY (MBH)	SENSIBLE COOLING CAPACITY (MBH)	EAT (°F db/°F WB)	LAT (°F db/°F WB)	REHEAT CAPACITY (MBH)	REHEAT SOURCE	HUMIDIFIER CAPACITY (LB/HR)	V/PH/HZ	FLA	MOP	DISCONNECT PROVIDED BY	STARTER PROVIDED BY	DIMENSIONS (LxWxH)	WEIGHT (LBS)	NOTES
CRAC-1	LIEBERT	DA080DP1CDHE1C11L0-AP	9,600	2	4.6 KW	0	MERV13	256	229	75/61.1		51	ELEC	22	460/3/60	59.6	80	MECHANICAL	MECHANICAL	99x33x96	2200	1,2,3,4,5,6,7,8,9,10,11
CRAC-2	LIEBERT	DA080DP1CDHE1C11L0-AP	9,600	2	4.6 KW	0	MERV13	256	229	75/61.1		51	ELEC	22	460/3/60	59.6	80	MECHANICAL	MECHANICAL	99x33x96	2200	1,2,3,4,5,6,7,8,9,10,11
CRAC-3	LIEBERT	DA080DP1CDHE1C11L0-AP	9,600	2	4.6 KW	0	MERV13	256	229	75/61.1		51	ELEC	22	460/3/60	59.6	80	MECHANICAL	MECHANICAL	99x33x96	2200	1,2,3,4,5,6,7,8,9,10,11

NOTES:

1. PROVIDE MANUFACTURER SUPPLIED CONTROLLER FOR EACH CRAC UNIT. EACH CONTROLLER SHALL BE INSTALLED PER MANUFACTURER'S WRITTEN INSTRUCTIONS AND RECCOMENDATIONS. MOUNTING LOCATION TO BE APPROVED BY COR.
2. PROVIDE MANUFACTURE SUPPLIED NETWORK CARD TO COMMUNICATED WITH BUILDING AUTOMATION SYSTEM. VERIFY PROTOCOL TO BE USED WITH COR.
3. RUN 2 CANBUS CABLES FROM EACH CRAC CONTROLLER TO AN 8-PORT NETWORK SWITCH TO ENABLE UNIT-TO-UNIT COMMUNICATION. UNITS TO OPERATE IN TEAMWORK MODE WITH LEAD/LAG FUCTIONS.
4. CANBUS COMMUNICATION CABLE NEEDS TO RUN FROM CRAC TO ASSOCIATED CONDENSING UNIT AND THEN TO RPB UNIT. COMMUNICATION CABLE NOT TO BE RUN THROUGH CONDUIT CONTAINING CODUCTORS OF A DIFFERENT VOLTAGE.
5. PROVIDE LEAK DETECTION CABLE TO BE LOCATED UNDER THE RAISED FLOOR AND AROUND EACH UNIT. LEAK ALARM TO BE REPORTED TO BUILDING AUTOMATION SYSTEM.
6. PROVIDE 36" MANUFACTURE SUPPLIED TOP PLENUM WITH DUCT COLLAR (DEDUCT ALTERNATE).
7. PROVIDE 15" FLOOR STAND. VERIFY ACCESS FLOOR HEIGHT WITH ARCHITECTURAL DRAWINGS PROIR TO BID.
8. VERIFY REFRIGERANT LINE SIZES WITH MANUFACTURE PRIOR TO INSTALLATION.
9. PROVIDE MANUFACTURE SUPPLIED SUPPLY AIR TEMPERATURE SENSOR. LOCATE SENSOR PER MANUFACTURER'S RECOMMENDATIONS. ONE SENSOR PER CRAC.
10. PROVIDE MANUFACTURE SUPPLIED REMOTE 2T SERVER RACK TEMPERATURE SENSORS. PROVIDE ONE SENSOR FOR EACH CABINENT AND RACK. COORDINATE INSTALLATION WITH COR. SENSOR READINGS TO BE EXPORTED TO BUILDING AUTOMATION SYSTEM.
11. PROVIDE ONE EXTRA HUMIDIFIER PAN PER CRAC UNIT.

PLUMBING FIXTURE SCHEDULE

P-NUMBER	DESCRIPTION	WFU	CW SFU	HW SFU	TOTAL SFU	WASTE PIPE SIZE	VENT PIPE SIZE	CW PIPE SUPPLY SIZE	HW PIPE SUPPLY SIZE
801	WALL HYDRANT	-	-	-	-	-	-	0.75	-
804	HOSE BIBB	-	-	-	-	-	-	0.75	-

NOTES:

1. PLUMBING FIXTURES ARE DESCRIBED IN MASTER SPECIFICATION 22 40 00, PLUMBING FIXTURES (PLUMBING FIXTURES AND TRIM).

SCHEDULE OF FLOOR DRAINS

AREA:	TYPE	SIZE	NOTES
MECHANICAL EQUIPMENT ROOM	B	4"	1,2

NOTES:

1. SEE MASTER SPECIFICATION 22 13 00, FACILITY SANITARY SEWERAGE FOR FLOOR DRAIN DESCRIPTIONS.
2. PROVIDE BARRIER-TYPE TRAP SEAL MIFAB MI-GARD OR SIMILAR.

AIR SEPARATOR SCHEDULE

UNIT TAG	MFGR.	MODEL	MAXIMUM FLOWRATE (GPM)	CONNECTION SIZE
AS-1	BELL & GOSSETT	EASB-1-1	19.8	1.5"

NOTES:

1 . AIR SEPARATOR SHALL HAVE AN INTERNAL STRAINER

UNIT HEATER SCHEDULE

UNIT TAG	LOCATION	MFGR.	MODEL	NOM. HEAT CAPACTY (MBH)	NET CORRECT. FACTOR	OPER. CAP. (MBH)	LEAVING AIR TEMP. (MAX/MIN)	AIR VOLUME CFM	FLUID	EWT TEMP	LWT TEMP	WATER FLOW GPM	V/PH/HZ	AMP	MCA	DISCONNECT PROVIDED BY	STARTER PROVIDED BY	APPOX. WEIGHT (LBS)	NOTES
UH-1	MECH 113	STERLING	HS-24	17,400	0.688	11,971	95	450	50% PG	180	160	1.9	115/1/60	0.8	1	ELECTRICAL	MECHANICAL	30	1
UH-2	FP CLOSET	STERLING	HS-24	17,400	0.688	11,971	95	450	50% PG	180	160	1.9	115/1/60	0.8	1	ELECTRICAL	MECHANICAL	30	1

NOTES:

1. PROVIDE OUTLET VANES FOR AIR PATTERN CONTROL.

EXPANSION TANK SCHEDULE

UNIT TAG	LOCATION	SERVES	MFGR.	MODEL	TANK VOLUME (GALLONS)	TANK ACCEPTANCE VOLUME (GALLONS)	SYSTEM FLUID	SYSTEM VOLUME (GALLONS)	SYSTEM MAXIMUM TEMP.	SYSTEM MINIMUM TEMP.	SYSTEM FILL PRESSURE (PSIG)	WEIGHT LBS
ET-1	MECH 002	WATER SYSTEM	BELL & GOSSETT	D-15V	8	2.4	WATER	20	180	160	25	102

NOTES:

1. HANG AND SUPPORT AS REQUIRED

LOUVER SCHEDULE

UNIT TAG	LOCATION	SERVES	MFGR.	MODEL	CFM	FRAME SIZE (WxH)	FREE AREA (SQFT)	VELOCITY (FPM)	BPWP (FPM)	PRESSURE (IN WG)
L-1	MECH 113	AHU-1,2,3,4	GREENHECK	ESJ-401	830	15x30	1.34	621	691	0.069

NOTES:

1. VERIFY LOUVER FINISH WITH ARCHITECT.
2. PROVIDE VIRTICAL SECURITY BAR ASSEMBLY WITH MINIMUM 1/2" DIAMETER RODS.

AIR HANDLING UNIT SCHEDULE

UNIT TAG	SERVES	LOCATION	MFGR.	MODEL	SUPPLY AIR(CFM)	MINIMUM OUTDOOR AIR (CFM)	ESP (IN. W.C.)	SUPPLY FAN HP	FILTRATION	COOLING CAPACITY (MBH)	EAT (°F db/°F WB)	LAT (°F db/°F WB)	HEAT SOURCE	HEAT CAPACITY (MBH)	EAT (°F)	LAT (°F)	V/PH/HZ	MCA	MOP	DISCONNECT PROVIDED BY	STARTER PROVIDED BY	DIMENSIONS (LxWxH)	WEIGHT (LBS)	NOTES
AHU-1	DATA 107	MECH 113	ENVIRO-TEC	H08	630	630	0.25	1/3	MERV 7 & 14	58.6	90/80	55/54	50% PG	69.5	-30	72	460/3/60	1.00	15	MECHANICAL	MECHANICAL	40x30x21	242	1,4
AHU-2	WORKROOM 109	MECH 113	ENVIRO-TEC	H08	600	55	0.40	1/3	MERV 7 & 14	20.8	77/65	54/53	50% PG	21.7	58	91	460/3/60	1.00	15	MECHANICAL	MECHANICAL	40x30x21	220	2,4
AHU-3	UTILITY 001	MECH 002	ENVIRO-TEC	H08	600	150	0.45	1/3	MERV 7 & 14	25.6	79/67	54/53	50% PG	27.3	47	89	460/3/60	1.00	15	MECHANICAL	MECHANICAL	40x30x21	220	4
AHU-4	MECH	MECH 004	ENVIRO-TEC	V16	1,500	320	0.75	3/4	MERV 7 & 14	54.8	80/67	57/55	50% PG	44.0	50	77	460/3/60	1.75	15	MECHANICAL	MECHANICAL	24x44x44	293	3,4

NOTES:

1. PROVIDE VFD. BALANCE SUPPLY AIR FLOW SETPOINT TO BE 300 CFM. ADJUST TO PROVIDE POSITIVE PRESSURE PER THE PRESSURIZATION HEIRARCHY ON SHEET M401. REDUCE FLOW AS NEEDED TO AVOID DOOR WHISTLING.
2. BALANCE AIRFLOW PER THE PRESSURIZATION HEIRARCHY ON SHEET M401. AVOID DOOR WHISTLING.
3. TIE UNIT INTO EXISTING DUCTWORK AND CONTROLS.
4. PROVIDE BACKDRAFT DAMPER ON OA DUCT.

AIR CONDITIONING UNIT SCHEDULE

UNIT TAG	SERVES	LOCATION	MFGR.	MODEL	SUPPLY AIR(CFM)	SUPPLY FAN HP	MINIMUM OUTDOOR AIR (CFM)	FILTRATION	COOLING CAPACITY (MBH)	EAT (°F db/°F WB)	LAT (°F db/°F WB)	HEATING CAPACITY (MBH)	HEATING SOURCE	HUMIDIFIER CAPACITY (LB/HR)	HUMIDIFIER ELECTRICAL INPUT (kW)	V/PH/HZ	FLA	MOP	DISCONNECT PROVIDED BY	STARTER PROVIDED BY	DIMENSIONS (LxWxH)	WEIGHT (LBS)	NOTES
AC-1	ELEC 111	ELEC 111	LIEBERT	MMD60E7AHELG	2,500	1.5	0	MERV 8	62.7	75/61	51.2/50.7	56.2	ELEC	8	2.8	460/3/60	19.8	25	MECHANICAL	MECHANICAL	50X46X24	498	1,2,3

NOTES:

1. REHEAT TO BE STANDARD ELECTRICAL ELEMENT
2. PROVIDE FILTER BOX WITH MERV 8 FILTER AND SWEAT ADAPTERS
3. PROVIDE MANUFACTURE SUPPLIED NETWORK CARD TO COMMUNICATED WITH BUILDING AUTOMATION SYSTEM. VERIFY PROTOCOL TO BE USED WITH COR.

HEAT EXCHANGER

UNIT TAG	LOCATION	SERVES	MFGR.	MODEL	TYPE	HEAT EXCHANGED (MBH)	STEAM SIDE		WATER SIDE					NOTES
							FLUID TYPE	STEAM PRESSURE (PSI)	FLUID TYPE	FLOW RATE (GPM)	FLUID PD (FT H2O)	EWT (°F)	LWT (°F)	
HX-1	MECH 002	B4 ADDITION	BELL & GOSSETT	QSU 4 3-2	SHELL & TUBE	185	STEAM	7	50% PG	19.8	0.4	160	180	1

NOTES:

1. REFER TO SPECIFICATIONS FOR GLYCOL MAKE-UP SYSTEM.

CABINET UNIT HEATER SCHEDULE

UNIT TAG	LOCATION	MFGR.	MODEL	CFM	HEATING CAPACITY (MBH)	NET CORRECT. FACTOR	OPER. CAP. (MBH)	FLUID TYPE	FLOW RATE (GPM)	EWT (°F)	LWT (°F)	V/PH/HZ	HP	DISCONNECT PROVIDED BY	STARTER PROVIDED BY	NOTES
CUH-1	115 STAIRWELL	STERLING	WI-1110-02	200	16.4	0.688	11,283	50% PG	1.8	180	160	120/1/60	1/15	ELECTRICAL	MECHANICAL	
CUH-2	101 VESTIBULE	STERLING	WI-1110-02	200	16.4	0.688	11,283	50% PG	1.8	180	160	120/1/60	1/15	ELECTRICAL	MECHANICAL	

NOTES:

CONDENSING UNIT SCHEDULE

UNIT TAG	UNIT SERVES	MFGR.	MODEL	NOMINAL COOLING CAPACITY (MBH)	V/PH/HZ	MCA	MOP	DISCONNECT PROVIDED BY	STARTER PROVIDED BY	DIMENSIONS (LxWxH)	WEIGHT (LBS)	NOTES
CU-1	CRAC-1	LIEBERT	MCM160	-	460/3/60	5.6	15	MECHANICAL	MECHANICAL	204x46x82	860	1,2,3,4
CU-2	CRAC-2	LIEBERT	MCM160	-	460/3/60	5.6	15	MECHANICAL	MECHANICAL	204x46x82	860	1,2,3,4
CU-3	CRAC-3	LIEBERT	MCM160	-	460/3/60	5.6	15	MECHANICAL	MECHANICAL	204x46x82	860	1,2,3,4
CU-4	AHU-1	YORK	YCJD60S44S3	57	460/3/60	11.6	20	MECHANICAL	MECHANICAL	34x34x32	195	1
CU-5	AC-1	LIEBERT	PFH067A-AL7	67	460/3/60	11.7	20	MECHANICAL	MECHANICAL	53x18x36	351	1
CU-6	AHU-2	YORK	YCJD24S41S1	24	208/1/60	12.4	20	MECHANICAL	MECHANICAL	24x24x28	129	1
CU-7	AHU-3	YORK	YCJD30S44S3	29	460/3/60	6.0	15	MECHANICAL	MECHANICAL	24x24x28	131	1
CU-8	AHU-4	YORK	YCJD60S44S3	57	460/3/60	11.6	20	MECHANICAL	MECHANICAL	34x34x32	195	1

NOTES:

1. CONDENSING UNIT LOCATION SHALL BE BASED ON MANUFACTURERS CLEARANCE REQUIREMENTS.
2. CONDENSER TO BE 60 INCHES HIGHER THAN RPB. PROVIDE 60" CONDENSER LEGS. LEGS TO BE FASTENED TO CONCRETE PAD VIA ANCHOR BOLTS.
3. TWO LEE-TEMP RECEIVERS PER CONDENSER, EACH REVEICVER TO HAVE SEPARATE 120V SUPPLY.
4. PROVIDE AND FIELD-INSTALL MANUFACTURE SUPPLIED SURGE PROTECTION DEVICE.

DIFFUSER & GRILLE LEGEND

	DIFFUSER/GRILLE			
	TYPE (SEE SCHEDULE) -----	A	8	----THROAT DIAMETER OR SIZE.
	CUBIC FEET PER MINUTE --	180	SA	--TYPE OF AIR FLOW
	(CFM)			

GRILLE, DIFFUSER, & REGISTER SCHEDULE

TYPE	MAKE/MODEL	DESCRIPTION	MATERIAL	FINISH
A	PRICE SCDA	ADJUSTABLE SQUARE CONE SUPPLY DIFFUSER	STEEL	WHITE
B	PRICE 530	LOUVERED FACE RETURN/EXHAUST GRILLE	STEEL	WHITE
C	PRICE 520D	DOUBLE DEFLECTION LOUVERED FACE SUPPLY GRILLE	STEEL	WHITE
D	PRICE 530D	LOUVERED FACE RETURN/EXHAUST GRILLE W/ DAMPER	STEEL	WHITE
E	PRICE MSTRBG	TOOL RESISTING SECURITY BARRIER GRILLE	STEEL	WHITE
F	ASM AF500 H-D GRATE	ACCESS FLOOR OPEN AIRFLOW PANEL	-	-
G	TATE PLENUM RETURN GRILL	81% OPEN AREA HIGH VOLUME RETURN GRILL	-	-

NOTES:

1. EGG CRATE RETURNS ARE PROHIBITED
2. TYPE F AND G BY GENERAL CONTRACTOR.

SUMP PUMP SCHEDULE

UNIT TAG	LOCATION	SERVES	MFGR.	MODEL	FLOW RATE (GPM)	HEAD (FT)	ELECTRICAL DATA		COORDINATION		NOTES
							V/PH/HZ	MOTOR HP	DISCONNECT PROVIDED BY	STARTER PROVIDED BY	
SP-1	UTILITY 001	UTILITY 001	HYDROMATIC	W-A1	18	20	115/1/60	1/3	MECHANICAL	MECHANICAL	1,2
SP-2	UTILITY 001	UTILITY 001	HYDROMATIC	W-A1	18	20	115/1/60	1/3	MECHANICAL	MECHANICAL	1,2

NOTES:

1. PLUMBING CONTRACTOR SHALL PROVIDE AND INSTALL 24" DIAMETER x 96" HIGH POLYETHYLENE SUMP BASIN WITH COVER AND ALARM.
2. PROVIDE CONTROL PANEL AND FLOAT.

REFRIGERANT PUMP BOX (RPB) SCHEDULE

UNIT TAG	CRAC SERVED	CONDENSING UNIT SERVED	MFGR.	MODEL	V/PH/HZ	FLA	MOP	DISCONNECT PROVIDED BY	STARTER PROVIDED BY	DIMENSIONS (LxWxH)	WEIGHT (LBS)	NOTES
RPB-1	CRAC-1	CU-1	LIEBERT	ECONOPHASE PR085	460/3/60	7	15	MECHANICAL	MECHANICAL	36x42x40	340	1
RPB-2	CRAC-2	CU-2	LIEBERT	ECONOPHASE PR085	460/3/60	7	15	MECHANICAL	MECHANICAL	36x42x40	340	1
RPB-3	CRAC-3	CU-3	LIEBERT	ECONOPHASE PR085	460/3/60	7	15	MECHANICAL	MECHANICAL	36x42x40	340	1

NOTES:

1. CONDENSING UNITS TO BE 60" ABOVE RPB HEIGHT.

PUMP SCHEDULE

UNIT TAG	LOCATION	SERVES	MFGR.	MODEL	FLOW RATE (GPM)	TOTAL HEAD (FT WC)	FLUID TYPE	RPM	V/PH	VARIABLE SPEED	HORSE POWER	DISCONNECT PROVIDED BY	STARTER PROVIDED BY	NOTES
P-1	MECH 002	HW LOOP	BELL & GOSSETT	ECOCIRC XL 20-35	19.8	10	50% PG	1500-4500	115V/1PH	Y	0.08	ELECTRICAL	MECHANICAL	1
P-2	MECH 002	HW LOOP	BELL & GOSSETT	ECOCIRC XL 20-35	19.8	10	50% PG	1500-4500	115V/1PH	Y	0.08	ELECTRICAL	MECHANICAL	1

NOTES:

1. PUMPS MOTORS TO BE SINGLE PHASE, VARIABLE SPEED, ELECTRONICALLY COMMUTAED, WITH FACTORY-PROVIDED ELECTRONIC DRIVE.

CONDENSATE LIFT STATION

UNIT TAG	LOCATION	MFGR.	MODEL	SYSTEM SF EDR	DISCH. PRES. (PSI)	PUMP CAPACITY (GPM)	RECEIVER CAPACITY (GAL)	MOTOR HP	ACCESSORIES	NOTES
CLS-1	002 MECHANICAL ROOM	BELL & GOSSETT	WCD122-20B-MA	12,000	20	18	14	1/3	MECHANICAL ALTERNATOR	

NOTES:

100% CONSTRUCTION DOCUMENTS

No	REVISION	DATE
1	ADDENDUM #4	05-12-16

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STAMP/SEAL:
I HEREBY CERTIFY THAT THIS PLAN SPECIFICATION, OR REPORT WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.

Joshua D. Wiehl MN 51522
Joshua D. Wiehl, PE REG. NO.
DATE: 12.03.14

DRAWING TITLE: MECHANICAL SCHEDULES

PROJECT TITLE: CONSTRUCT NEW IT CENTER FOR HEALTH CARE TECHNOLOGY MANAGEMENT EXPANSION

DES: 12.03.14
PLOT SCALE: AS NOTED
PROJECT #: 656-14-246
DESIGNED: NEW IT
CHECKED BY: JDM
DRAWN: NRW
CAD FILE:
LOCATION: ST. CLOUD VA HCS, ST. CLOUD, MN 56303
DRAWING NO: M801

St. Cloud VA Health Care System
Brainerd | Montevideo | Alexandria

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